

MASON LAKE

MASON COUNTY

WRIA 14

T22N-R02W-34

LATITUDE 47° 21' 14" LONGITUDE 122° 55' 17"

PHYSICAL DATA

Drainage area	20.2 mi ²
Altitude	194 ft
Lake Area	1,000 acres
Lake Volume	49,000 acre-ft
Mean Depth	48 ft
Maximum Depth	90 ft
Shoreline Length	11 mi
Shoreline Configuration	2.4
Development of Volume	0.53
Bottom Slope	1.2 pct
Surface Inflow	Yes
Surface Outflow	Yes

CULTURAL DATA

Residential Development	95	pct
Number of Nearshore Homes	642	
Land Use in Drainage Basin		
Residential-Urban	0	pct
Residential-Suburban	3	pct
Agricultural	0	pct
Forest or Unproductive	89	pct
Lake Surface	8	pct
Public Boat Access to Lake	Yes	

WATER-QUALITY DATA (in milligrams per liter unless otherwise indicated)

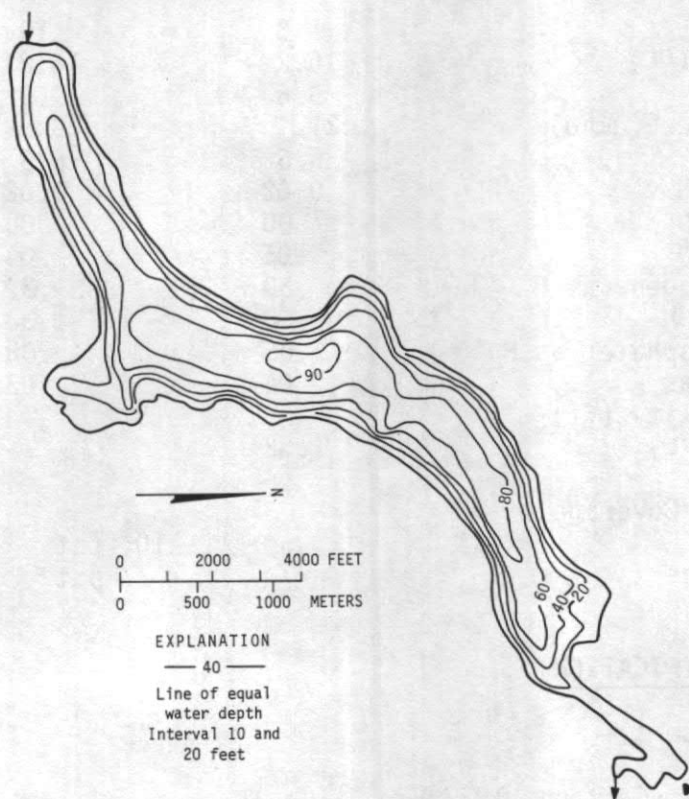
Date

June 12, 1981

Depth (ft)	3	78
Water Temperature (°C)	16.2	9.8
Dissolved Oxygen	9.6	6.0
Specific Conductance (umho)	43	41
pH (units)	7.1	6.8
Total Nitrate, as N	0.00	0.00
Total Nitrite, as N	.00	.00
Total Ammonia, as N	.06	.06
Total Organic Nitrogen, as N	.93	.71
Total Nitrogen, as N	.99	.77
Dissolved Orthophosphate, as P	.01	.01
Total Phosphorus, as P	.02	.01
Secchi-Disc Visibility (ft)	16	
Chlorophyll <u>a</u> (ug/L)	1.52	--
Aquatic Macrophyte Coverage		
Littoral Zone	80	pct
Water-Surface Zone	1	pct

LAKE TROPHIC CLASSIFICATION

Characteristic Value	93
Trophic State Index (Carlson, 1977)	
TSI _{SD}	37
TSI _{TP}	47
TSI _{Chl}	35



Mason Lake, Mason County. Photo taken June 12, 1981, view westerly.
Bathymetric map from Washington Department of Game, May 4, 1954.

NAHWATZEL LAKE

MASON COUNTY

WRIA 22

T20N-R05W-08

LATITUDE 47° 14' 08" LONGITUDE 123° 20' 08"

PHYSICAL DATA

Drainage area	6.20 mi ²
Altitude	440 ft
Lake Area	270 acres
Lake Volume	4,600 acre-ft
Mean Depth	17 ft
Maximum Depth	25 ft
Shoreline Length	2.9 mi
Shoreline Configuration	1.3
Development of Volume	0.69
Bottom Slope	0.65 pct
Surface Inflow	Yes
Surface Outflow	Yes

CULTURAL DATA

Residential Development	70	pct
Number of Nearshore Homes	116	
Land Use in Drainage Basin		
Residential-Urban	0	pct
Residential-Suburban	2	pct
Agricultural	0	pct
Forest or Unproductive	91	pct
Lake Surface	7	pct
Public Boat Access to Lake	Yes	

WATER-QUALITY DATA (in milligrams per liter unless otherwise indicated)

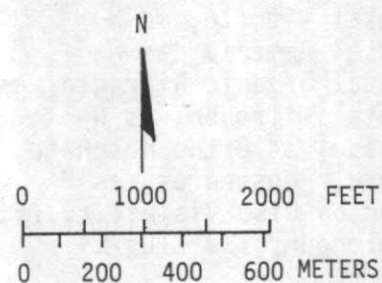
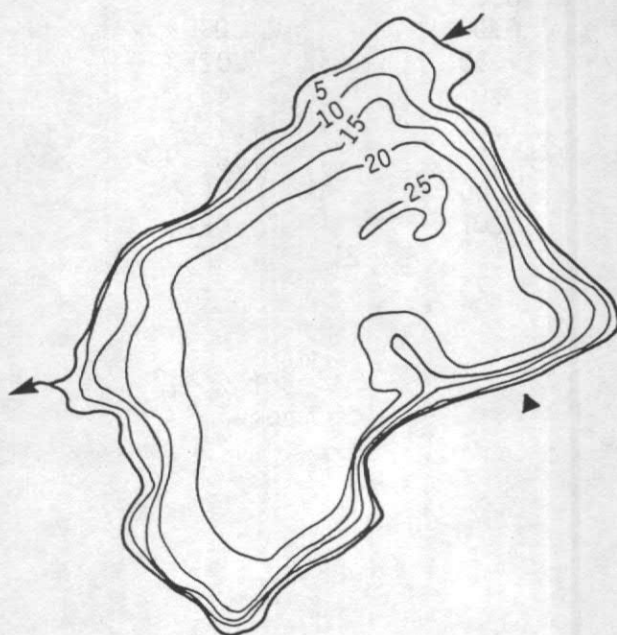
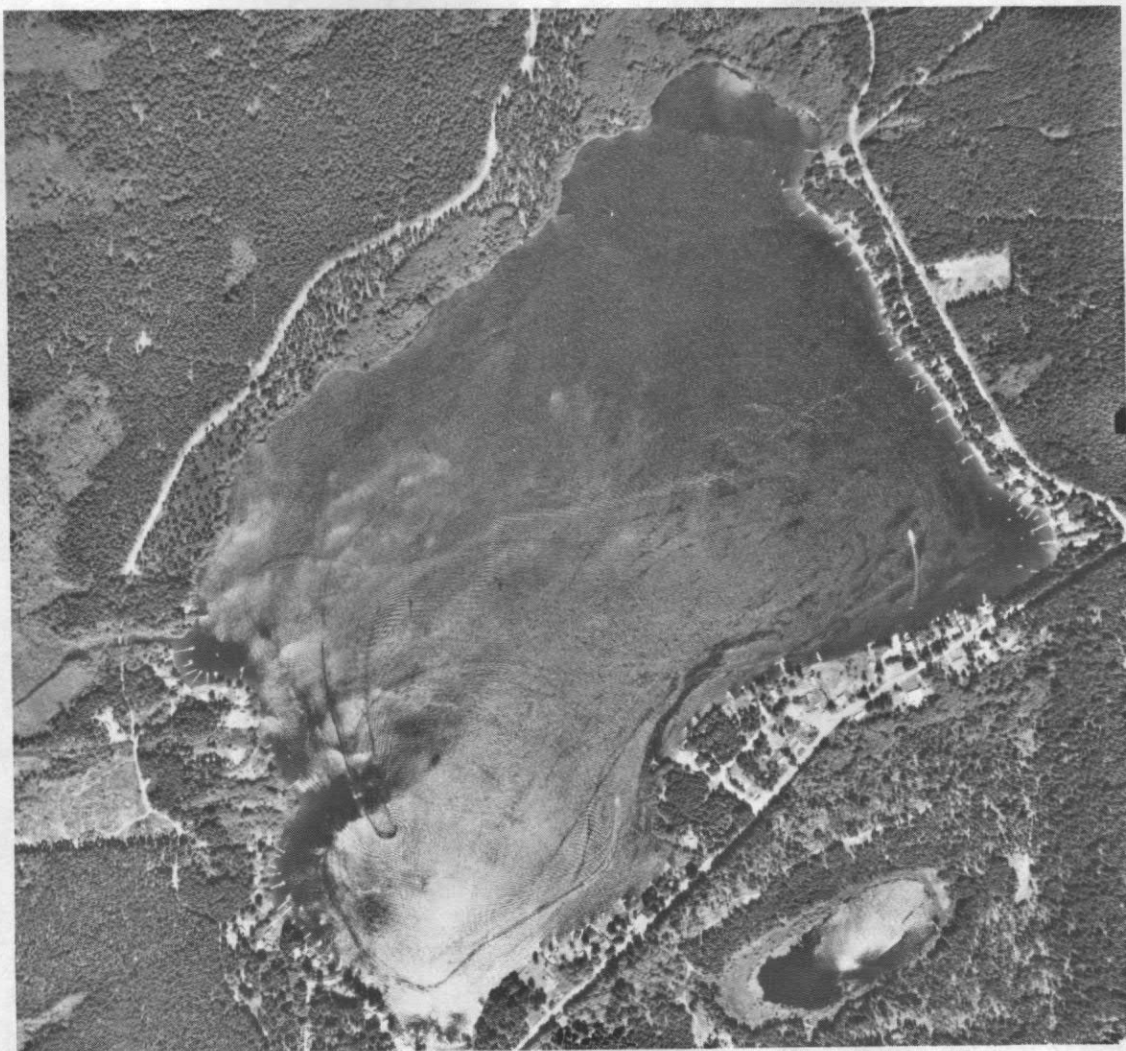
Date

June 10, 1981

Depth (ft)	3	19
Water Temperature (°C)	16.2	16.2
Dissolved Oxygen	9.6	9.5
Specific Conductance (umho)	21	19
pH (units)	6.6	6.5
Total Nitrate, as N	0.02	0.02
Total Nitrite, as N	.00	.00
Total Ammonia, as N	.06	.04
Total Organic Nitrogen, as N	.50	.32
Total Nitrogen, as N	.58	.38
Dissolved Orthophosphate, as P	.05	.03
Total Phosphorus, as P	.04	.03
Secchi-Disc Visibility (ft)		13
Chlorophyll <u>a</u> (ug/L)	1.52	--
Aquatic Macrophyte Coverage		
Littoral Zone		10 pct
Water-Surface Zone		<1 pct

LAKE TROPHIC CLASSIFICATION

Characteristic Value	75
Trophic State Index (Carlson, 1977)	
TSI _{SD}	40
TSI _{TP}	57
TSI _{Chl}	35



EXPLANATION
 — 10 —
 Line of equal
 water depth
 Interval 5 feet

Nahwatzel Lake, Mason County. Photo taken May 20, 1978.
 Bathymetric map from Washington Department of Game, June 7, 1949.

BLUE LAKE

OKANOGAN COUNTY

WRIA 49

T35N-R26E-06

LATITUDE 48° 33' 51" LONGITUDE 119° 36' 42"

PHYSICAL DATA

Drainage area	0.28 mi ²
Altitude	2,562 ft
Lake Area	20 acres
Lake Volume	634 acre-ft
Mean Depth	31 ft
Maximum Depth	50 ft
Shoreline Length	0.76 mi
Shoreline Configuration	1.2
Development of Volume	0.63
Bottom Slope	4.7 pct
Surface Inflow	No
Surface Outflow	No

CULTURAL DATA

Residential Development	0	pct
Number of Nearshore Homes	0	
Land Use in Drainage Basin		
Residential-Urban	0	pct
Residential-Suburban	0	pct
Agricultural	37	pct
Forest or Unproductive	54	pct
Lake Surface	9	pct
Public Boat Access to Lake	No	

WATER-QUALITY DATA (in milligrams per liter unless otherwise indicated)

Date

July 16, 1981

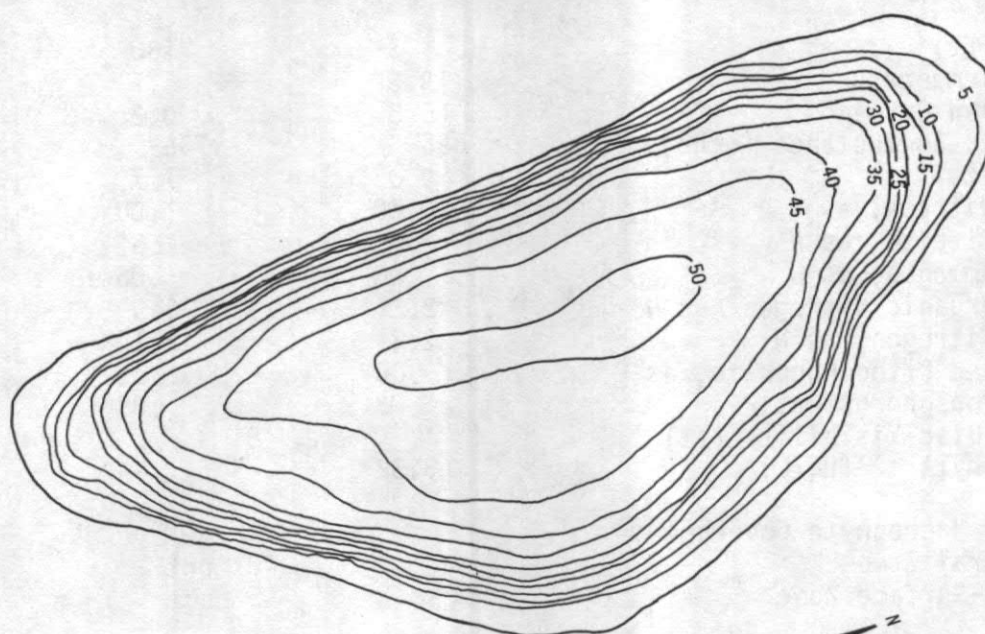
Depth (ft)	3	44
Water Temperature (°C)	18.8	5.1
Dissolved Oxygen	9.0	0.2
Specific Conductance (umho)	2,045	2,145
pH (units)	8.6	7.7
Total Nitrate, as N	0.00	.00
Total Nitrite, as N	.00	.02
Total Ammonia, as N	.07	.43
Total Organic Nitrogen, as N	1.0	1.4
Total Nitrogen, as N	1.1	1.8
Dissolved Orthophosphate, as P	.00	.01
Total Phosphorus, as P	.01	.01
Secchi-Disc Visibility (ft)		21
Chlorophyll <u>a</u> (ug/L)	.75	--
Aquatic Macrophyte Coverage		
Littoral Zone		<1 pct
Water-Surface Zone		<1 pct

LAKE TROPHIC CLASSIFICATION

Characteristic Value 85

Trophic State Index (Carlson, 1977)

TSI _{SD}	33
TSI _{TP}	37
TSI _{Chl}	28



0 200 400 600 FEET
0 50 100 150 METERS

EXPLANATION
— 25 —
Line of equal
water depth
Interval 5 feet



Blue (35N-26E-6) Lake, Okanogan County. Photo taken July 16, 1981, view northwesterly. Bathymetric map from U.S. Geological Survey, June 23, 1981.

BONNER LAKE

OKANOGAN COUNTY

WRIA 48

T34N-R22E-32

LATITUDE 48° 23' 47" LONGITUDE 120° 05' 59"

PHYSICAL DATA

Drainage area	0.80 mi ²
Altitude	2,266 ft
Lake Area	15 acres
Lake Volume	233 acre-ft
Mean Depth	15 ft
Maximum Depth	32 ft
Shoreline Length	0.60 mi
Shoreline Configuration	1.1
Development of Volume	0.48
Bottom Slope	3.5 pct
Surface Inflow	No
Surface Outflow	No

CULTURAL DATA

Residential Development	0	pct
Number of Nearshore Homes	0	
Land Use in Drainage Basin		
Residential-Urban	0	pct
Residential-Suburban	0	pct
Agricultural	92	pct
Forest or Unproductive	5	pct
Lake Surface	3	pct
Public Boat Access to Lake	No	

WATER-QUALITY DATA (in milligrams per liter unless otherwise indicated)

Date

July 16, 1981

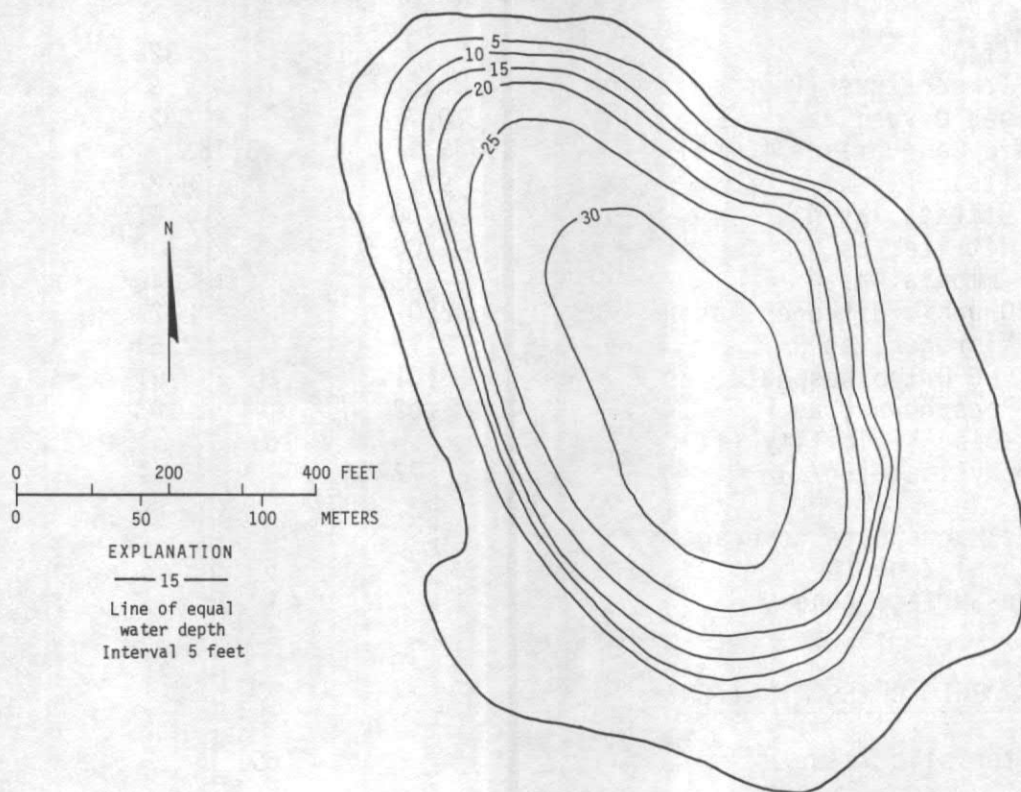
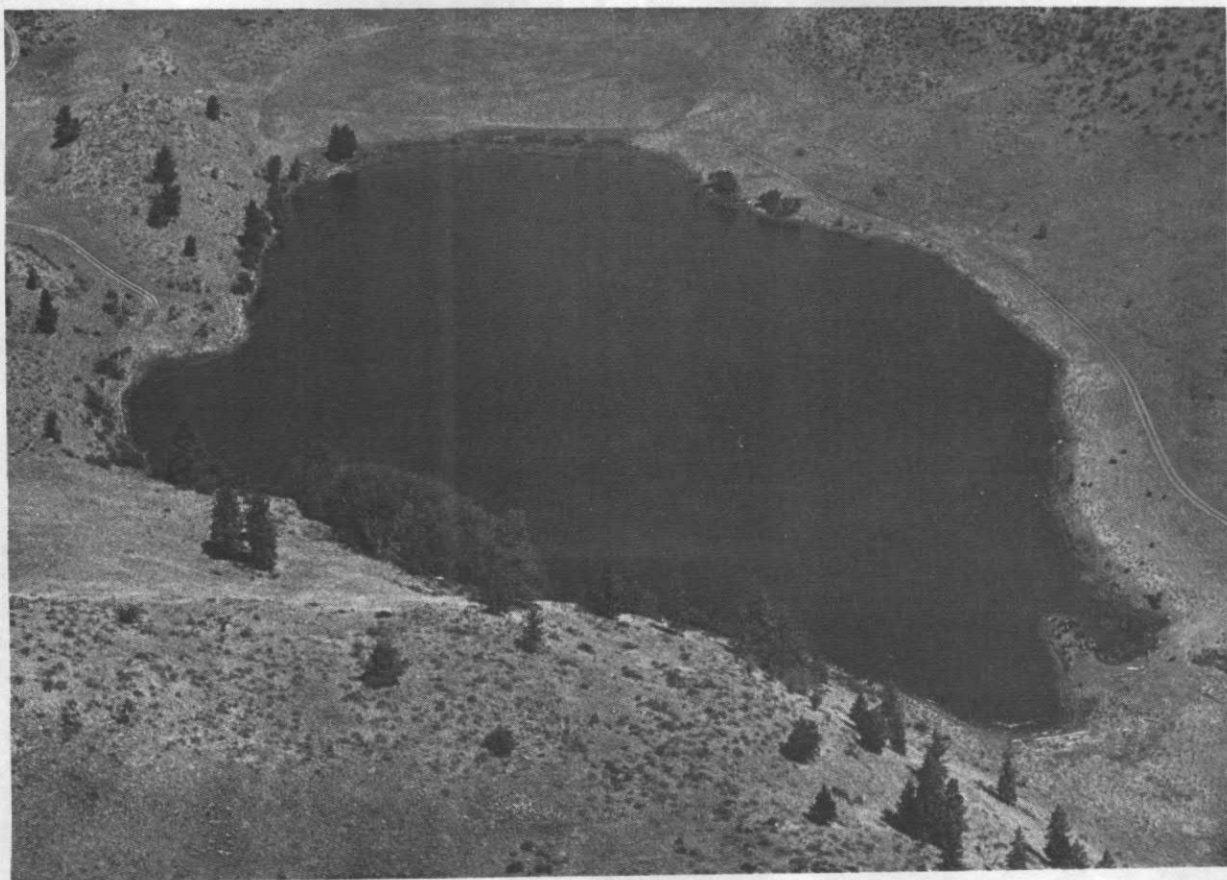
Depth (ft)	3	30
Water Temperature (°C)	19.8	6.7
Dissolved Oxygen	10.8	0.2
Specific Conductance (umho)	695	735
pH (units)	9.0	7.7
Total Nitrate, as N	0.00	.00
Total Nitrite, as N	.00	.02
Total Ammonia, as N	.08	.06
Total Organic Nitrogen, as N	2.2	2.0
Total Nitrogen, as N	2.3	2.1
Dissolved Orthophosphate, as P	.00	.09
Total Phosphorus, as P	.03	.08
Secchi-Disc Visibility (ft)		8
Chlorophyll <u>a</u> (ug/L)	3.32	--
Aquatic Macrophyte Coverage		
Littoral Zone		40 pct
Water-Surface Zone		5 pct

LAKE TROPHIC CLASSIFICATION

Characteristic Value 228

Trophic State Index (Carlson, 1977)

TSI _{SD}	47
TSI _{TP}	53
TSI _{Chl}	42



Bonner Lake, Okanogan County. Photo taken July 16, 1981, view northerly.
Bathymetric map from Washington Department of Game, January 6, 1948.

CASTOR LAKE

OKANOGAN COUNTY

WRIA 49

T35N-R26E-16

LATITUDE 48° 32' 17" LONGITUDE 119° 33' 40"

PHYSICAL DATA

Drainage area	.66 mi ²
Altitude	1,950 ft
Lake Area	15 acres
Lake Volume	268 acre-ft
Mean Depth	18 ft
Maximum Depth	39 ft
Shoreline Length	0.65 mi
Shoreline Configuration	1.2
Development of Volume	0.47
Bottom Slope	4.32 pct
Surface Inflow	No
Surface Outflow	No

CULTURAL DATA

Residential Development	0	pct
Number of Nearshore Homes	0	
Land Use in Drainage Basin		
Residential-Urban	0	pct
Residential-Suburban	0	pct
Agricultural	87	pct
Forest or Unproductive	7	pct
Lake Surface	6	pct
Public Boat Access to Lake	No	

WATER-QUALITY DATA (in milligrams per liter unless otherwise indicated)

Date

July 16, 1981

Depth (ft)	3	32
Water Temperature (°C)	20.0	7.9
Dissolved Oxygen	10.7	0.2
Specific Conductance (umho)	3,335	3,185
pH (units)	9.1	8.8
Total Nitrate, as N	0.00	.01
Total Nitrite, as N	.00	.00
Total Ammonia, as N	.09	.40
Total Organic Nitrogen, as N	2.0	2.2
Total Nitrogen, as N	2.1	2.6
Dissolved Orthophosphate, as P	.01	.01
Total Phosphorus, as P	.02	.03
Secchi-Disc Visibility (ft)		16
Chlorophyll <u>a</u> (ug/L)	.72	--

Aquatic Macrophyte Coverage

Littoral Zone

< 5 pct

Water-Surface Zone

< 1 pct

LAKE TROPHIC CLASSIFICATION

Characteristic Value

169

Trophic State Index (Carlson, 1977)

TSISD

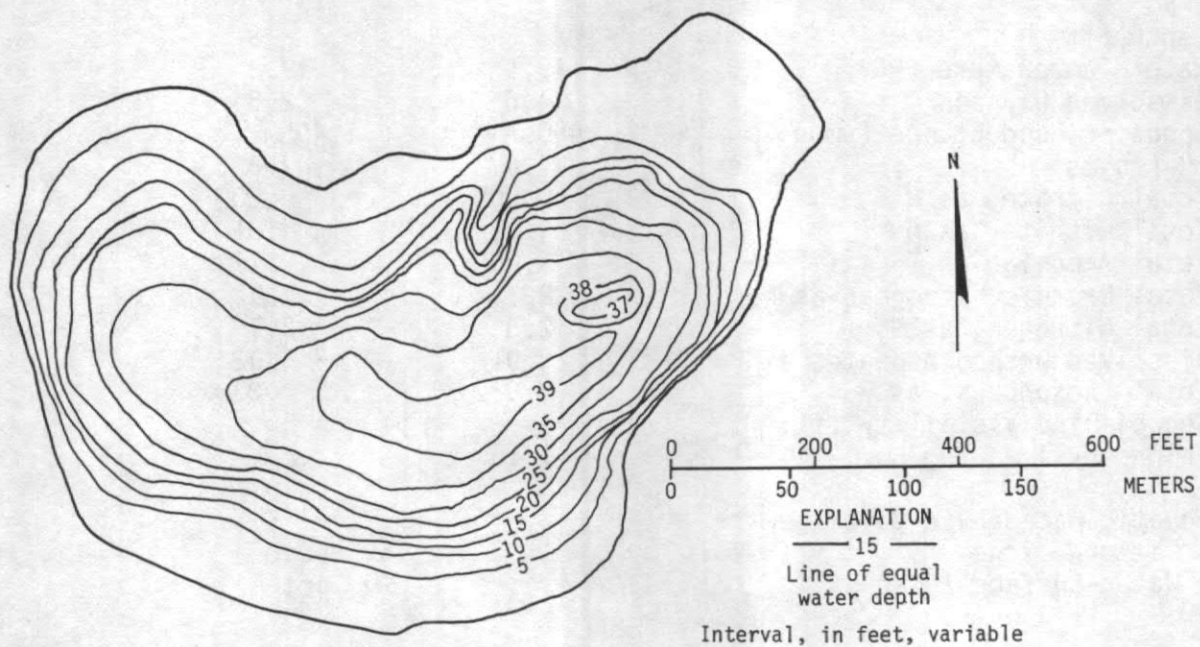
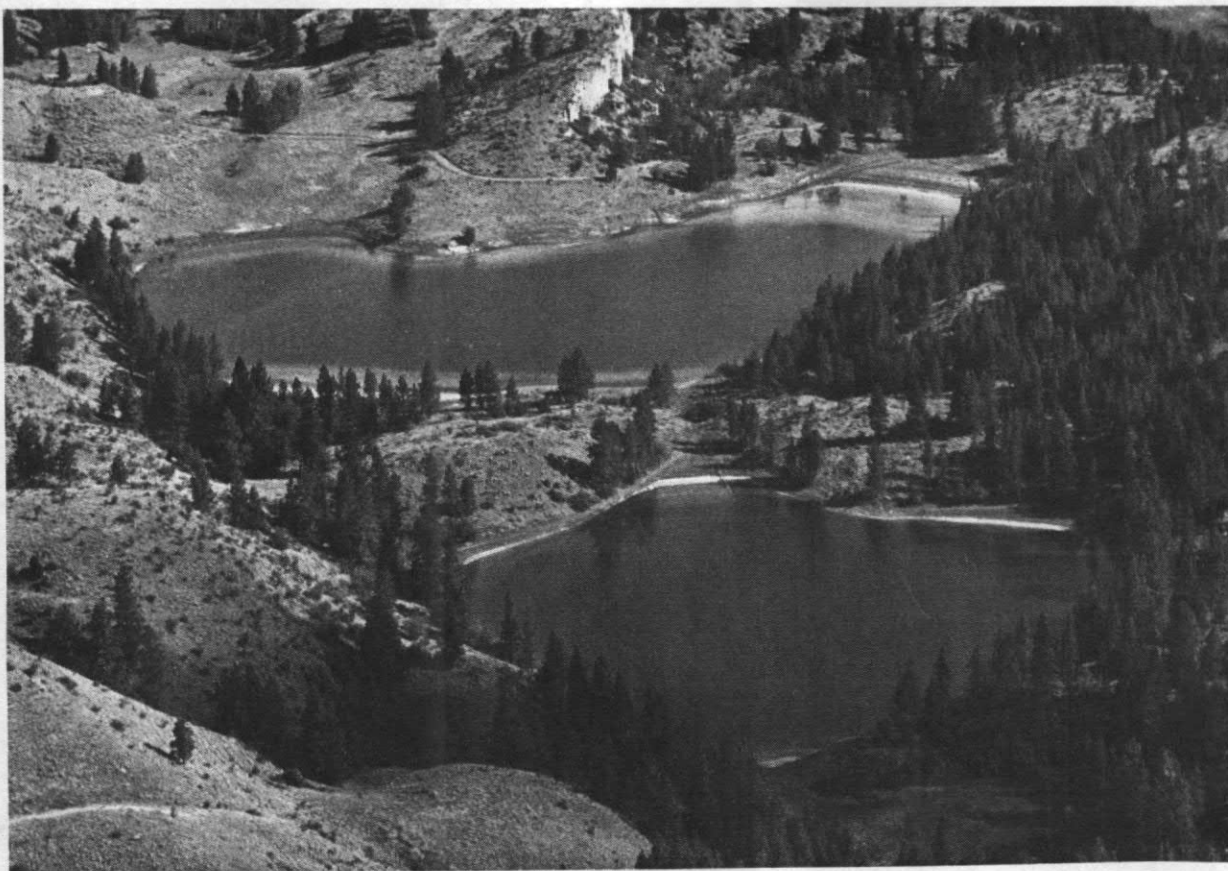
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TSITP

47

TSIch1

27



Castor Lake, Okanogan County. Photo taken July 16, 1981, view northerly. Castor Lake at top of photo. Bathymetric map from U.S. Geological Survey, June 23, 1981.

MUD LAKE

OKANOGAN COUNTY

WRIA 49

T36N-R25E-25

LATITUDE 48° 35' 44" LONGITUDE 119° 37' 41"

PHYSICAL DATA

Drainage area	4.5 mi ²
Altitude	2,120 ft
Lake Area	7 acres
Lake Volume	43 acre-ft
Mean Depth	6 ft
Maximum Depth	16 ft
Shoreline Length	0.56 mi
Shoreline Configuration	1.5
Development of Volume	0.38
Bottom Slope	2.5 pct
Surface Inflow	No
Surface Outflow	No

CULTURAL DATA

Residential Development	10	pct
Number of Nearshore Homes	1	
Land Use in Drainage Basin		
Residential-Urban	0	pct
Residential-Suburban	0	pct
Agricultural	72	pct
Forest or Unproductive	27	pct
Lake Surface	1	pct
Public Boat Access to Lake	No	

WATER-QUALITY DATA (in milligrams per liter unless otherwise indicated)

Date

July 15, 1981

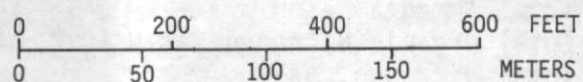
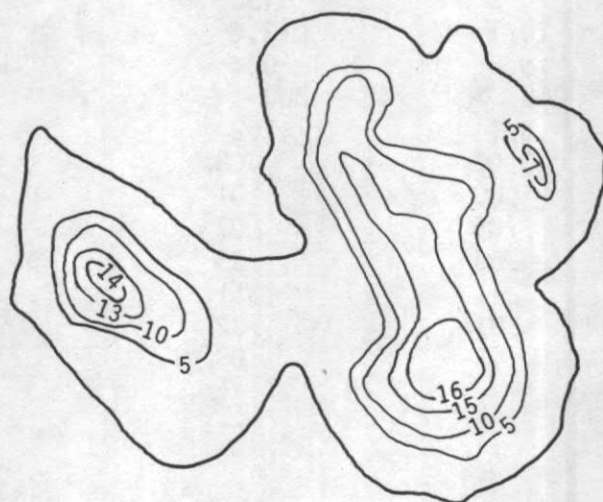
Depth (ft)	3	8
Water Temperature (°C)	19.4	17.3
Dissolved Oxygen	4.6	2.6
Specific Conductance (umho)	1,490	1,495
pH (units)	7.6	7.5
Total Nitrate, as N	0.00	.00
Total Nitrite, as N	.01	.01
Total Ammonia, as N	.20	.17
Total Organic Nitrogen, as N	2.1	1.9
Total Nitrogen, as N	2.3	2.1
Dissolved Orthophosphate, as P	.01	.02
Total Phosphorus, as P	.03	.03
Secchi-Disc Visibility (ft)		>10
Chlorophyll <u>a</u> (ug/L)	1.15	--
Aquatic Macrophyte Coverage		
Littoral Zone		60 pct
Water-Surface Zone		0 pct

LAKE TROPHIC CLASSIFICATION

Characteristic Value 201

Trophic State Index (Carlson, 1977)

TSI _{SD}	44
TSI _{TP}	53
TSI _{chl}	32



EXPLANATION

— 10 —

Line of equal
water depth

Interval, in feet, variable

Mud (36N-25E-25) Lake, Okanogan County. Photo taken July 15, 1981, view easterly. Mud Lake at lower right of photo. Bathymetric map from U.S. Geological Survey, June 23, 1981.

OSOY00S LAKE

OKANOGAN COUNTY

WRIA 49

T40N-R27E-22

LATITUDE 48° 57' 00" LONGITUDE 119° 25' 42"

PHYSICAL DATA

Drainage area	--	mi ²
Altitude	911	ft
Lake Area	3,320	acres
Lake Volume	111,000	acre-ft
Mean Depth	34	ft
Maximum Depth	86	ft
Shoreline Length	17	mi
Shoreline Configuration	2.1	
Development of Volume	0.41	
Bottom Slope	0.63	pct
Surface Inflow	Yes	
Surface Outflow	Yes	

CULTURAL DATA

Residential Development	--	pct
Number of Nearshore Homes	--	
Land Use in Drainage Basin		
Residential-Urban	--	pct
Residential-Suburban	--	pct
Agricultural	--	pct
Forest or Unproductive	--	pct
Lake Surface	--	pct
Public Boat Access to Lake	Yes	

WATER-QUALITY DATA (in milligrams per liter unless otherwise indicated)

Date

July 15, 1981

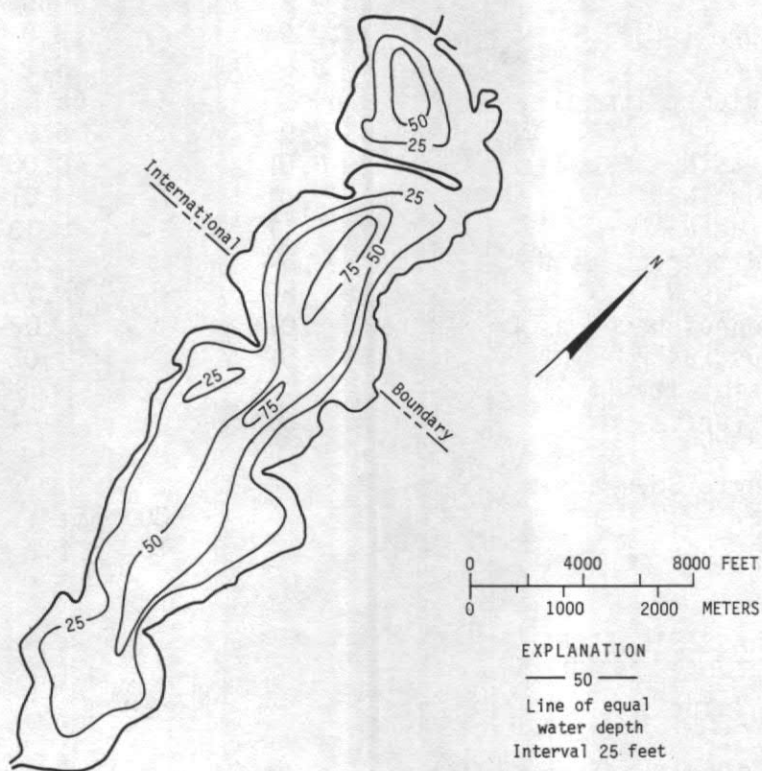
Depth (ft)	3	50
Water Temperature (°C)	20.1	13.6
Dissolved Oxygen	8.8	0.4
Specific Conductance (umho)	262	300
pH (units)	8.1	7.2
Total Nitrate, as N	0.00	.08
Total Nitrite, as N	.00	.01
Total Ammonia, as N	.05	.07
Total Organic Nitrogen, as N	.66	.35
Total Nitrogen, as N	.71	.51
Dissolved Orthophosphate, as P	.01	.02
Total Phosphorus, as P	.02	.00
Secchi-Disc Visibility (ft)		9
Chlorophyll <u>a</u> (ug/L)	3.28	--
Aquatic Macrophyte Coverage		
Littoral Zone		40 pct
Water-Surface Zone		0 pct

LAKE TROPHIC CLASSIFICATION

Characteristic Value 105

Trophic State Index (Carlson, 1977)

TSI _{SD}	45
TSI _{TP}	47
TSI _{chl}	42



Osoyoos Lake, Okanogan County. Photo taken August 1974, view northwesterly.
Bathymetric map from Washington Department of Game, August 10, 1966.

DIAMOND LAKE

PEND OREILLE COUNTY

WRIA 55

T30N-R44E-03

LATITUDE 48° 07' 08" LONGITUDE 117° 13' 05"

PHYSICAL DATA

Drainage area	17.4 mi ²
Altitude	2,340 ft
Lake Area	800 acres
Lake Volume	22,000 acre-ft
Mean Depth	27 ft
Maximum Depth	58 ft
Shoreline Length	7.0 mi
Shoreline Configuration	1.8
Development of Volume	0.47
Bottom Slope	0.87 pct
Surface Inflow	No
Surface Outflow	Yes

CULTURAL DATA

Residential Development	80	pct
Number of Nearshore Homes	352	
Land Use in Drainage Basin		
Residential-Urban	0	pct
Residential-Suburban	2	pct
Agricultural	13	pct
Forest or Unproductive	78	pct
Lake Surface	7	pct
Public Boat Access to Lake	Yes	

WATER-QUALITY DATA (in milligrams per liter unless otherwise indicated)

Date

July 13, 1981

Depth (ft)	3	35
Water Temperature (°C)	18.9	14.0
Dissolved Oxygen	8.6	5.2
Specific Conductance (umho)	64	65
pH (units)	7.9	6.9
Total Nitrate, as N	0.01	0.00
Total Nitrite, as N	.01	.01
Total Ammonia, as N	.11	.13
Total Organic Nitrogen, as N	.67	.63
Total Nitrogen, as N	.80	.77
Dissolved Orthophosphate, as P	.01	.03
Total Phosphorus, as P	.01	.02
Secchi-Disc Visibility (ft)	22	
Chlorophyll <u>a</u> (ug/L)	.64	--

Aquatic Macrophyte Coverage

Littoral Zone

30 pct

Water-Surface Zone

10 pct

LAKE TROPHIC CLASSIFICATION

Characteristic Value

59

Trophic State Index (Carlson, 1977)

TSI_{SD}

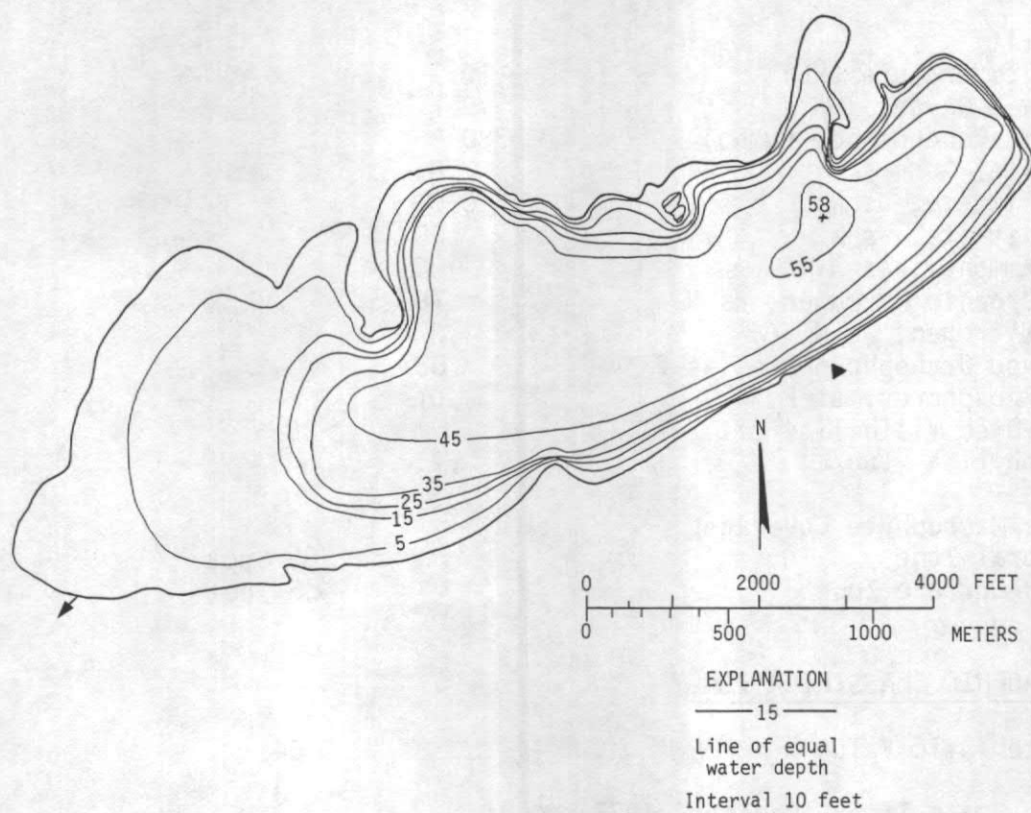
33

TSI_{TP}

37

TSI_{Chl}

26



Diamond Lake, Pend Oreille County. Photo taken August 2, 1977.
Bathymetric map from Washington Department of Game, January 27, 1955.

LUCERNE (YORKE) LAKE

PEND OREILLE COUNTY

WRIA 62

T40N-R43E-12

LATITUDE 48° 58' 34" LONGITUDE 117° 18' 50"

PHYSICAL DATA

Drainage area	0.40 mi ²
Altitude	2,448 ft
Lake Area	9 acres
Lake Volume	104 acre-ft
Mean Depth	12 ft
Maximum Depth	20 ft
Shoreline Length	0.66 mi
Shoreline Configuration	1.6
Development of Volume	0.58
Bottom Slope	2.8 pct
Surface Inflow	No
Surface Outflow	Yes

CULTURAL DATA

Residential Development	0	pct
Number of Nearshore Homes	0	
Land Use in Drainage Basin		
Residential-Urban	0	pct
Residential-Suburban	0	pct
Agricultural	0	pct
Forest or Unproductive	97	pct
Lake Surface	3	pct
Public Boat Access to Lake	No	

WATER-QUALITY DATA (in milligrams per liter unless otherwise indicated)

Date July 15, 1981

Depth (ft)	3	--
Water Temperature (°C)	16.7	--
Dissolved Oxygen	9.7	--
Specific Conductance (umho)	380	--
pH (units)	7.5	--
Total Nitrate, as N	0.01	--
Total Nitrite, as N	.00	--
Total Ammonia, as N	.08	--
Total Organic Nitrogen, as N	.78	--
Total Nitrogen, as N	.87	--
Dissolved Orthophosphate, as P	.00	--
Total Phosphorus, as P	.01	--
Secchi-Disc Visibility (ft)	>26	
Chlorophyll <u>a</u> (ug/L)	.73	--

Aquatic Macrophyte Coverage

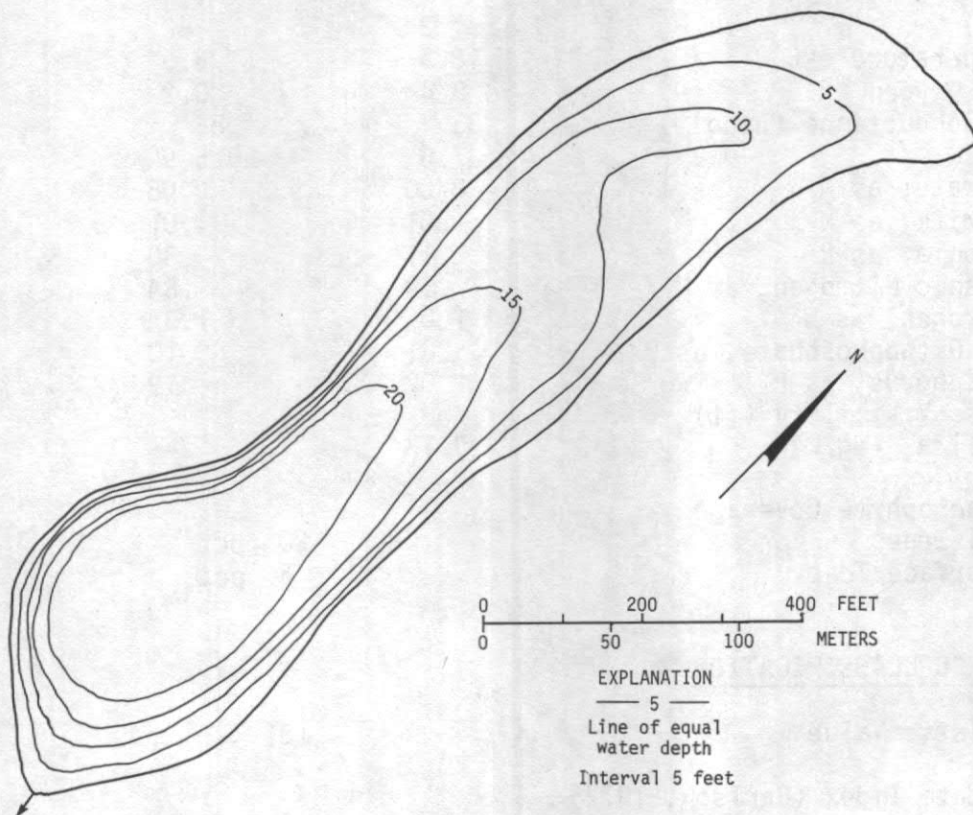
Littoral Zone	85	pct
Water-Surface Zone	<5	pct

LAKE TROPHIC CLASSIFICATION

Characteristic Value 64

Trophic State Index (Carlson, 1977)

TSI _{SD}	30
TSI _{TP}	37
TSI _{Chl}	27



Lucerne (Yorke) Lake, Pend Oreille County. Photo taken July 15, 1981, view northwesterly. Bathymetric map from Washington Department of Game, January 3, 1957.

SACHEEN LAKE

PEND OREILLE COUNTY

WRIA 55

T31N-R43E-35

LATITUDE 48° 08' 47" LONGITUDE 117° 20' 05"

PHYSICAL DATA

Drainage area	42.8 mi ²
Altitude	2,234 ft
Lake Area	320 acres
Lake Volume	7,600 acre-ft
Mean Depth	24 ft
Maximum Depth	40 ft
Shoreline Length	6.3 mi
Shoreline Configuration	2.5
Development of Volume	0.60
Bottom Slope	0.95 pct
Surface Inflow	Yes
Surface Outflow	Yes

CULTURAL DATA

Residential Development	85	pct
Number of Nearshore Homes	232	
Land Use in Drainage Basin		
Residential-Urban	0	pct
Residential-Suburban	1	pct
Agricultural	13	pct
Forest or Unproductive	82	pct
Lake Surface	4	pct
Public Boat Access to Lake	Yes	

WATER-QUALITY DATA (in milligrams per liter unless otherwise indicated)

Date

July 14, 1981

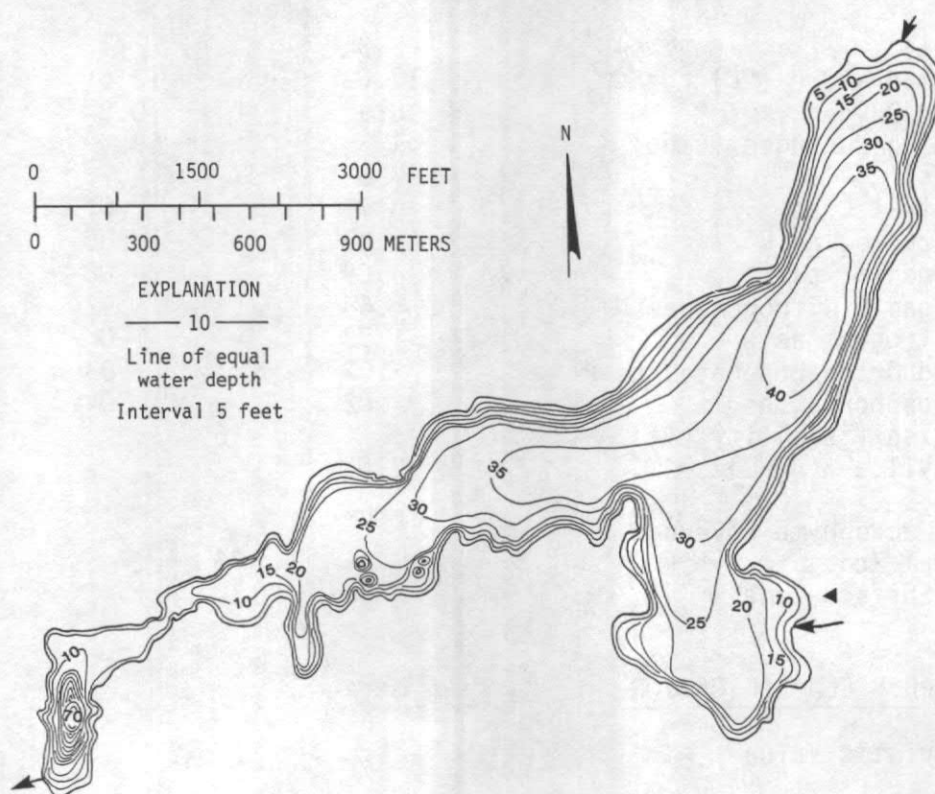
Depth (ft)	3	42
Water Temperature (°C)	18.5	8.9
Dissolved Oxygen	8.4	0.2
Specific Conductance (umho)	83	88
pH (units)	7.8	6.9
Total Nitrate, as N	0.00	.08
Total Nitrite, as N	.01	.01
Total Ammonia, as N	.11	.36
Total Organic Nitrogen, as N	.89	.84
Total Nitrogen, as N	1.0	1.3
Dissolved Orthophosphate, as P	.01	.10
Total Phosphorus, as P	.02	.19
Secchi-Disc Visibility (ft)		11
Chlorophyll <u>a</u> (ug/L)	9.13	--
Aquatic Macrophyte Coverage		
Littoral Zone		20 pct
Water-Surface Zone		5 pct

LAKE TROPHIC CLASSIFICATION

Characteristic Value 131

Trophic State Index (Carlson, 1977)

TSI _{SD}	43
TSI _{TP}	47
TSI _{Chl}	52



Sacheen Lake, Pend Oreille County. Photo taken August 1, 1977.
Bathymetric map from Washington Department of Game, March 4, 1957.

BONNEY LAKE

PIERCE COUNTY

WRIA 10

T20N-R05E-28

LATITUDE 47° 11' 23" LONGITUDE 122° 10' 57"

PHYSICAL DATA

Drainage area	0.22 mi ²
Altitude	605 ft
Lake Area	17 acres
Lake Volume	160 acre-ft
Mean Depth	10 ft
Maximum Depth	19 ft
Shoreline Length	0.74 mi
Shoreline Configuration	1.3
Development of Volume	0.52
Bottom Slope	2.0 pct
Surface Inflow	No
Surface Outflow	Yes

CULTURAL DATA

Residential Development	90	pct
Number of Nearshore Homes	22	
Land Use in Drainage Basin		
Residential-Urban	0	pct
Residential-Suburban	8	pct
Agricultural	4	pct
Forest or Unproductive	76	pct
Lake Surface	12	pct
Public Boat Access to Lake	Yes	

WATER-QUALITY DATA (in milligrams per liter unless otherwise indicated)

Date

June 23, 1981

Depth (ft)	3	17
Water Temperature (°C)	17.0	12.6
Dissolved Oxygen	8.9	0.2
Specific Conductance (umho)	64	69
pH (units)	7.0	6.7
Total Nitrate, as N	0.01	.01
Total Nitrite, as N	.00	.00
Total Ammonia, as N	.09	.08
Total Organic Nitrogen, as N	.68	.92
Total Nitrogen, as N	.78	1.0
Dissolved Orthophosphate, as P	.02	.03
Total Phosphorus, as P	.02	.04
Secchi-Disc Visibility (ft)		16
Chlorophyll <u>a</u> (ug/L)	2.03	--

Aquatic Macrophyte Coverage

Littoral Zone

75 pct

Water-Surface Zone

30 pct

LAKE TROPHIC CLASSIFICATION

Characteristic Value

76

Trophic State Index (Carlson, 1977)

TSISD

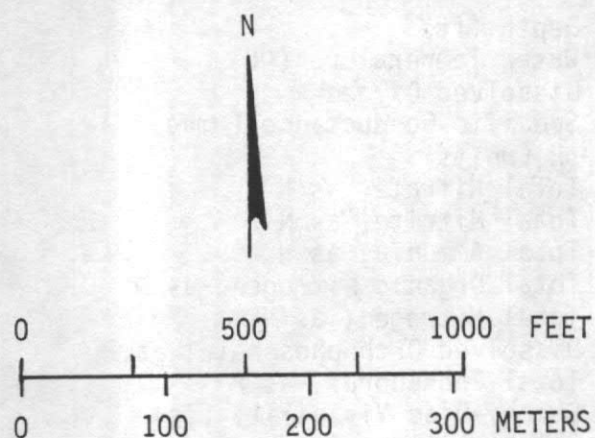
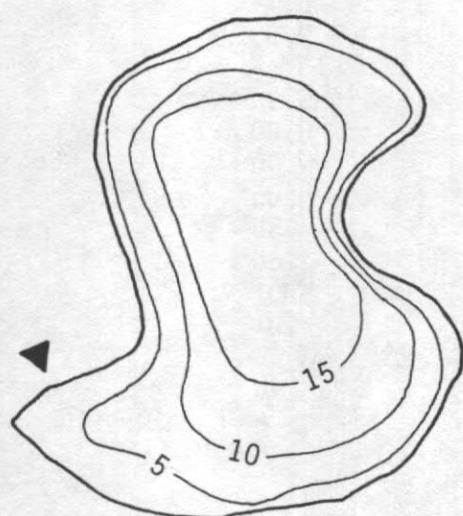
37

TSITP

47

TSIChl

38



EXPLANATION
 —10—
 Line of equal
 water depth
 Interval 5 feet

Bonney Lake, Pierce County. Photo taken June 23, 1981, view northeasterly.
 Bathymetric map from U.S. Geological Survey, June 18, 1973.

CARNEY LAKE

PIERCE COUNTY

WRIA 15

T22N-R01W-14

LATITUDE 47° 24' 02" LONGITUDE 122° 45' 39"

PHYSICAL DATA

Drainage area	0.46 mi ²
Altitude	350 ft
Lake Area	41 acres
Lake Volume	500 acre-ft
Mean Depth	12 ft
Maximum Depth	25 ft
Shoreline Length	1.1 mi
Shoreline Configuration	1.3
Development of Volume	0.49
Bottom Slope	1.7 pct
Surface Inflow	No
Surface Outflow	No

CULTURAL DATA

Residential Development	95	pct
Number of Nearshore Homes	29	
Land Use in Drainage Basin		
Residential-Urban	0	pct
Residential-Suburban	5	pct
Agricultural	0	pct
Forest or Unproductive	81	pct
Lake Surface	14	pct

Public Boat Access to Lake Yes

WATER-QUALITY DATA (in milligrams per liter unless otherwise indicated)

Date

June 24, 1981

Depth (ft)	3	21
Water Temperature (°C)	18.5	18.1
Dissolved Oxygen	9.5	9.5
Specific Conductance (umho)	17	16
pH (units)	6.2	5.9
Total Nitrate, as N	0.00	0.00
Total Nitrite, as N	.00	.00
Total Ammonia, as N	.06	.05
Total Organic Nitrogen, as N	.89	.55
Total Nitrogen, as N	.95	.60
Dissolved Orthophosphate, as P	.01	.01
Total Phosphorus, as P	.01	.01
Secchi-Disc Visibility (ft)	> 23	
Chlorophyll <u>a</u> (ug/L)	1.50	--

Aquatic Macrophyte Coverage

Littoral Zone

60 pct

Water-Surface Zone

0 pct

LAKE TROPHIC CLASSIFICATION

Characteristic Value

77

Trophic State Index (Carlson, 1977)

TSI_{SD}

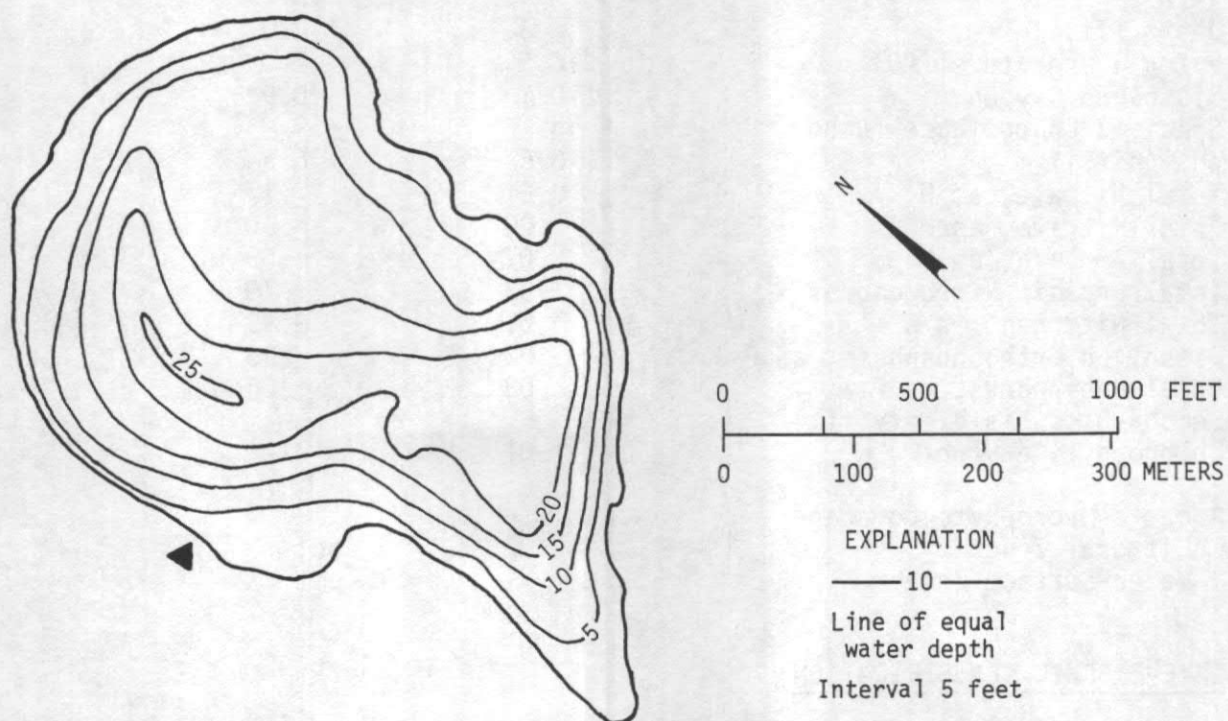
32

TSI_{TP}

37

TSI_{Chl}

35



Carney Lake, Pierce County. Photo taken June 24, 1981, view northeasterly.
Bathymetric map from U.S. Geological Survey, June 22, 1973.

CLEAR LAKE

PIERCE COUNTY

WRIA 11

T17N-R04E-27

LATITUDE 46° 55' 33" LONGITUDE 122° 16' 34"

PHYSICAL DATA

Drainage area	0.41 mi ²
Altitude	778 ft
Lake Area	160 acres
Lake Volume	6,100 acre-ft
Mean Depth	38 ft
Maximum Depth	85 ft
Shoreline Length	2.1 mi
Shoreline Configuration	1.2
Development of Volume	0.45
Bottom Slope	2.8 pct
Surface Inflow	No
Surface Outflow	No

CULTURAL DATA

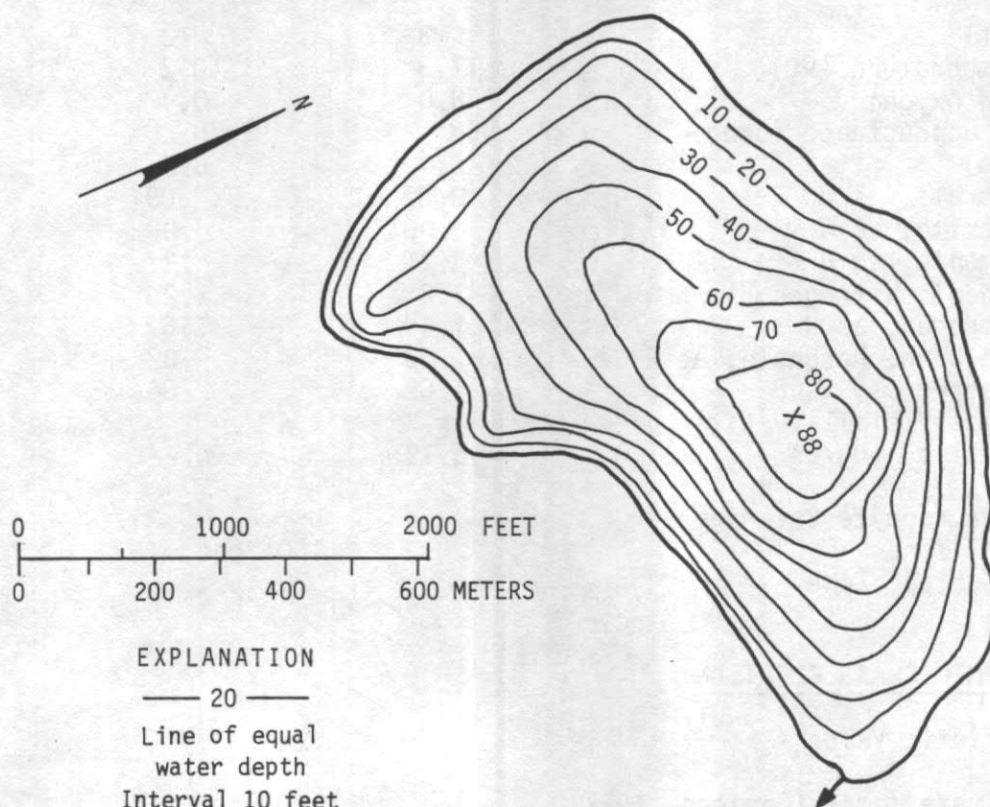
Residential Development	85	pct
Number of Nearshore Homes	105	
Land Use in Drainage Basin		
Residential-Urban	0	pct
Residential-Suburban	17	pct
Agricultural	0	pct
Forest or Unproductive	34	pct
Lake Surface	49	pct
Public Boat Access to Lake	Yes	

WATER-QUALITY DATA (in milligrams per liter unless otherwise indicated)

Date	June 23, 1981	
Depth (ft)	3	70
Water Temperature (°C)	16.5	7.0
Dissolved Oxygen	10.1	0.9
Specific Conductance (umho)	55	59
pH (units)	6.6	6.5
Total Nitrate, as N	0.01	.17
Total Nitrite, as N	.00	.00
Total Ammonia, as N	.07	.08
Total Organic Nitrogen, as N	.53	.70
Total Nitrogen, as N	.61	.95
Dissolved Orthophosphate, as P	.02	.03
Total Phosphorus, as P	.02	.08
Secchi-Disc Visibility (ft)	25	
Chlorophyll <u>a</u> (ug/L)	1.01	--
Aquatic Macrophyte Coverage		
Littoral Zone	2	pct
Water-Surface Zone	<1	pct

LAKE TROPHIC CLASSIFICATION

Characteristic Value	50
Trophic State Index (Carlson, 1977)	
TSI _{SD}	31
TSI _{TP}	47
TSI _{Chl}	31



Clear Lake, Pierce County. Photo taken June 23, 1981, view northwesterly.
Bathymetric map from Washington Department of Game, February 7, 1949.

CRANBERRY LAKE

PIERCE COUNTY

WRIA 11

T16N-R03E-01

LATITUDE 46° 53' 51" LONGITUDE 122° 21' 46"

PHYSICAL DATA

Drainage area	0.55 mi ²
Altitude	644 ft
Lake Area	37 acres
Lake Volume	430 acre-ft
Mean Depth	12 ft
Maximum Depth	18 ft
Shoreline Length	0.86 mi
Shoreline Configuration	1.0
Development of Volume	0.65
Bottom Slope	1.3 pct
Surface Inflow	Yes
Surface Outflow	Yes

CULTURAL DATA

Residential Development	6	pct
Number of Nearshore Homes	2	
Land Use in Drainage Basin		
Residential-Urban	0	pct
Residential-Suburban	0	pct
Agricultural	50	pct
Forest or Unproductive	40	pct
Lake Surface	10	pct
Public Boat Access to Lake	No	

WATER-QUALITY DATA (in milligrams per liter unless otherwise indicated)

Date

June 4, 1981

Depth (ft)	3	13
Water Temperature (°C)	17.3	10.2
Dissolved Oxygen	8.0	0.4
Specific Conductance (umho)	68	75
pH (units)	6.4	6.3
Total Nitrate, as N	0.02	.09
Total Nitrite, as N	.00	.00
Total Ammonia, as N	.21	.27
Total Organic Nitrogen, as N	1.2	1.2
Total Nitrogen, as N	1.4	1.6
Dissolved Orthophosphate, as P	.02	.02
Total Phosphorus, as P	.02	.04
Secchi-Disc Visibility (ft)		4
Chlorophyll <u>a</u> (ug/L)	5.19	--

Aquatic Macrophyte Coverage

Littoral Zone

100 pct

Water-Surface Zone

20 pct

LAKE TROPHIC CLASSIFICATION

Characteristic Value

223

Trophic State Index (Carlson, 1977)

TSI_{SD}

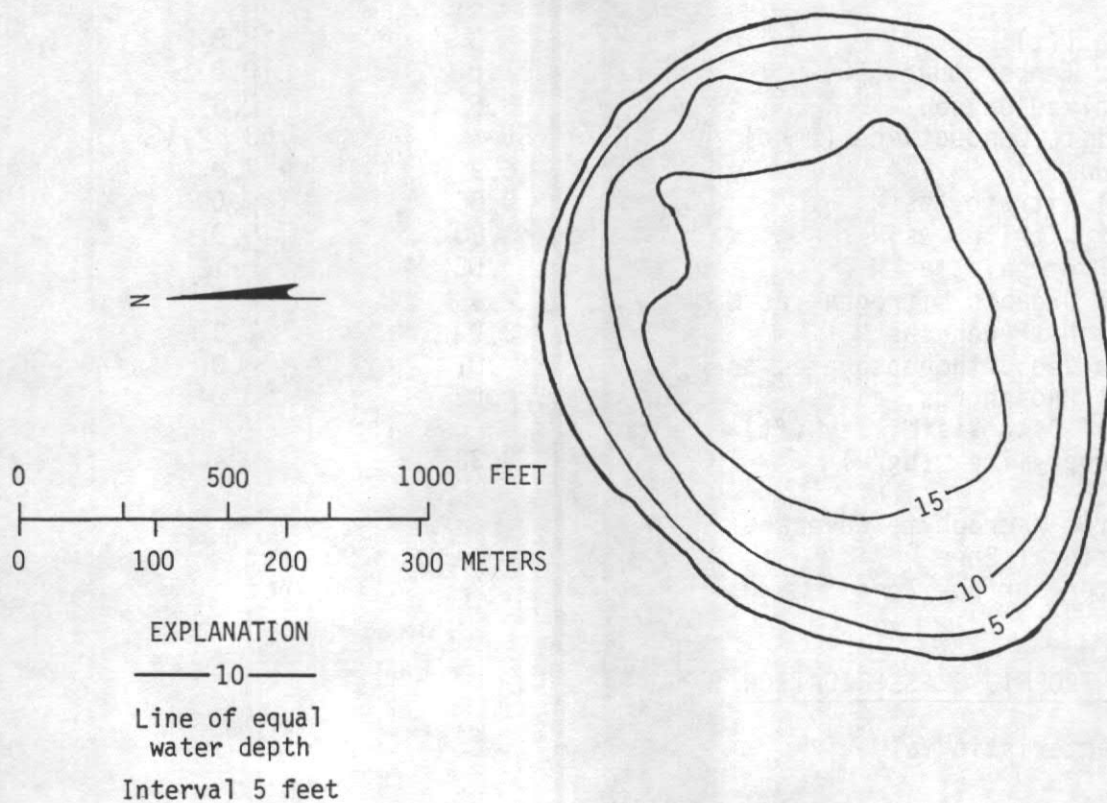
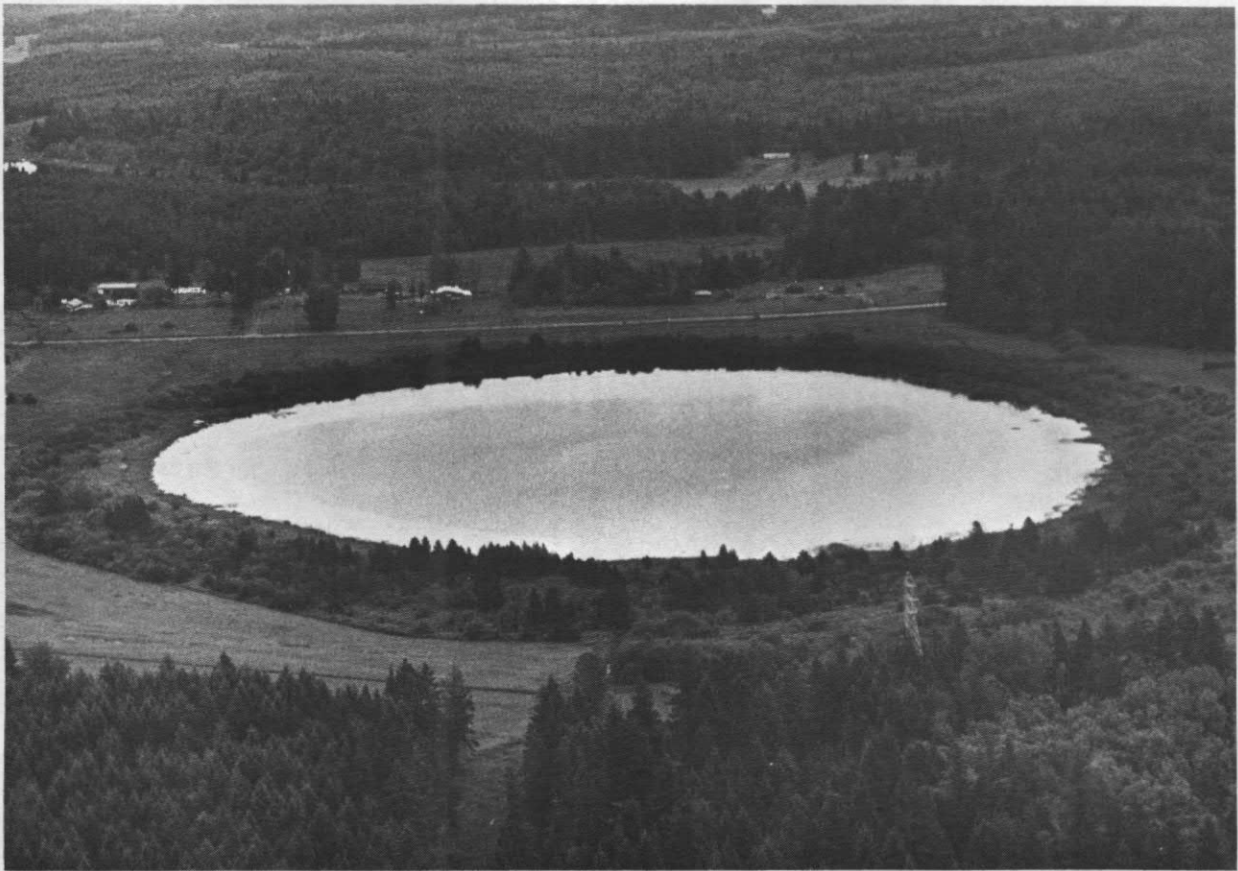
57

TSI_{TP}

47

TSI_{Chl}

47



Cranberry Lake, Pierce County. Photo taken June 4, 1981, view easterly.
Bathymetric map from U.S. Geological Survey, June 14, 1973.

CRESCENT LAKE

PIERCE COUNTY

WRIA 15

T22N-R02E-20

LATITUDE 47° 23' 18" LONGITUDE 122° 34' 19"

PHYSICAL DATA

Drainage area	1.18 mi ²
Altitude	166 ft
Lake Area	50 acres
Lake Volume	780 acre-ft
Mean Depth	16 ft
Maximum Depth	29 ft
Shoreline Length	1.4 mi
Shoreline Configuration	1.4
Development of Volume	0.54
Bottom Slope	1.3 pct
Surface Inflow	Yes
Surface Outflow	Yes

CULTURAL DATA

Residential Development	50	pct
Number of Nearshore Homes	31	
Land Use in Drainage Basin		
Residential-Urban	0	pct
Residential-Suburban	1	pct
Agricultural	3	pct
Forest or Unproductive	89	pct
Lake Surface	7	pct
Public Boat Access to Lake	Yes	

WATER-QUALITY DATA (in milligrams per liter unless otherwise indicated)

Date

June 12, 1981

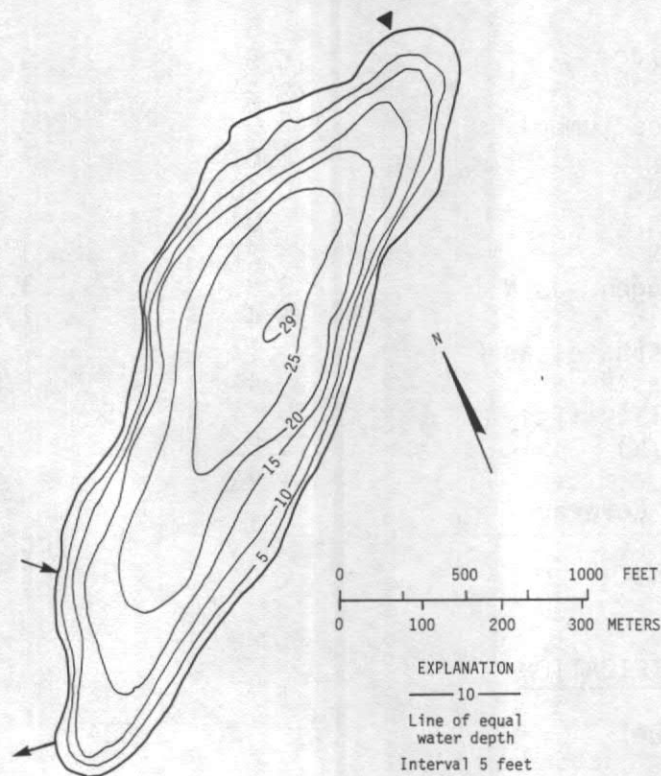
Depth (ft)	3	28
Water Temperature (°C)	17.8	10.8
Dissolved Oxygen	8.6	0.8
Specific Conductance (umho)	55	63
pH (units)	6.9	7.0
Total Nitrate, as N	0.00	.00
Total Nitrite, as N	.00	.01
Total Ammonia, as N	.05	.12
Total Organic Nitrogen, as N	2.9	1.2
Total Nitrogen, as N	2.9	1.3
Dissolved Orthophosphate, as P	.01	.01
Total Phosphorus, as P	.02	.04
Secchi-Disc Visibility (ft)		10
Chlorophyll <u>a</u> (ug/L)	2.38	--
Aquatic Macrophyte Coverage		
Littoral Zone		90 pct
Water-Surface Zone		5 pct

LAKE TROPHIC CLASSIFICATION

Characteristic Value 261

Trophic State Index (Carlson, 1977)

TSI _{SD}	44
TSI _{TP}	47
TSI _{Chl}	39



Crescent (22N-2E-20) Lake, Pierce County. Photo taken June 12, 1981, view northeasterly. Bathymetric map from Washington Department of Game, August 19, 1947.

HARTS LAKE

PIERCE COUNTY

WRIA 11

T16N-R03E-07

LATITUDE 46° 53' 32" LONGITUDE 122° 28' 18"

PHYSICAL DATA

Drainage area	3.57 mi ²
Altitude	347 ft
Lake Area	120 acres
Lake Volume	3,100 acre-ft
Mean Depth	26 ft
Maximum Depth	50 ft
Shoreline Length	1.6 mi
Shoreline Configuration	1.0
Development of Volume	0.52
Bottom Slope	5.5 pct
Surface Inflow	Yes
Surface Outflow	Yes

CULTURAL DATA

Residential Development	25	pct
Number of Nearshore Homes	14	
Land Use in Drainage Basin		
Residential-Urban	0	pct
Residential-Suburban	<1	pct
Agricultural	20	pct
Forest or Unproductive	74	pct
Lake Surface	6	pct
Public Boat Access to Lake	Yes	

WATER-QUALITY DATA (in milligrams per liter unless otherwise indicated)

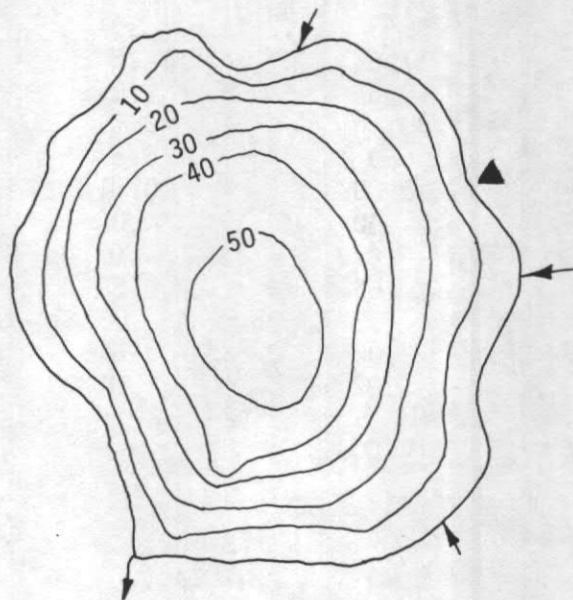
Date

June 9, 1981

Depth (ft)	3	39
Water Temperature (°C)	16.5	6.9
Dissolved Oxygen	12.2	0.2
Specific Conductance (umho)	148	200
pH (units)	8.0	7.0
Total Nitrate, as N	0.40	.00
Total Nitrite, as N	.04	.00
Total Ammonia, as N	.21	3.9
Total Organic Nitrogen, as N	3.8	3.6
Total Nitrogen, as N	4.4	7.5
Dissolved Orthophosphate, as P	.13	.12
Total Phosphorus, as P	.44	1.9
Secchi-Disc Visibility (ft)		5
Chlorophyll <u>a</u> (ug/L)	10.2	--
Aquatic Macrophyte Coverage		
Littoral Zone		90 pct
Water-Surface Zone		5 pct

LAKE TROPHIC CLASSIFICATION

Characteristic Value	534
Trophic State Index (Carlson, 1977)	
TSISD	54
TSITP	92
TSIChl	53



0 500 1000 FEET
0 300 METERS

EXPLANATION

— 20 —

Line of equal
water depth

Interval 10 feet

Harts Lake, Pierce County. Photo taken June 9, 1981, view northerly.
Bathymetric map from Washington Department of Game, June 1, 1953.

LOUISE LAKE

PIERCE COUNTY

WRIA 12

T19N-R02E-04

LATITUDE 47° 09' 36" LONGITUDE 122° 34' 00"

PHYSICAL DATA

Drainage area	0.34 mi ²
Altitude	230 ft
Lake Area	39 acres
Lake Volume	860 acre-ft
Mean Depth	22 ft
Maximum Depth	35 ft
Shoreline Length	0.91 mi
Shoreline Configuration	1.0
Development of Volume	0.63
Bottom Slope	2.4 pct
Surface Inflow	No
Surface Outflow	No

CULTURAL DATA

Residential Development	100	pct
Number of Nearshore Homes	80	
Land Use in Drainage Basin		
Residential-Urban	8	pct
Residential-Suburban	41	pct
Agricultural	21	pct
Forest or Unproductive	12	pct
Lake Surface	18	pct
Public Boat Access to Lake	Yes	

WATER-QUALITY DATA (in milligrams per liter unless otherwise indicated)

Date

June 24, 1981

Depth (ft)	3	30
Water Temperature (°C)	17.6	12.6
Dissolved Oxygen	10.6	4.8
Specific Conductance (umho)	80	72
pH (units)	6.9	6.6
Total Nitrate, as N	0.00	0.01
Total Nitrite, as N	.00	.00
Total Ammonia, as N	.07	.07
Total Organic Nitrogen, as N	.65	.69
Total Nitrogen, as N	.72	.77
Dissolved Orthophosphate, as P	.00	.01
Total Phosphorus, as P	.02	.01
Secchi-Disc Visibility (ft)		12
Chlorophyll <u>a</u> (ug/L)	.00	--

Aquatic Macrophyte Coverage

Littoral Zone

3 pct

Water-Surface Zone

<1 pct

LAKE TROPHIC CLASSIFICATION

Characteristic Value

78

Trophic State Index (Carlson, 1977)

TSISD

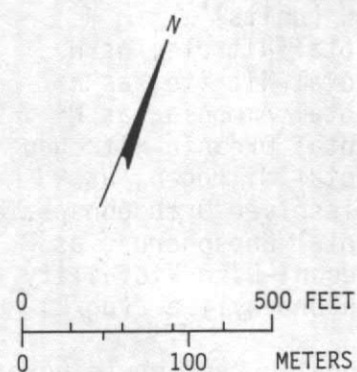
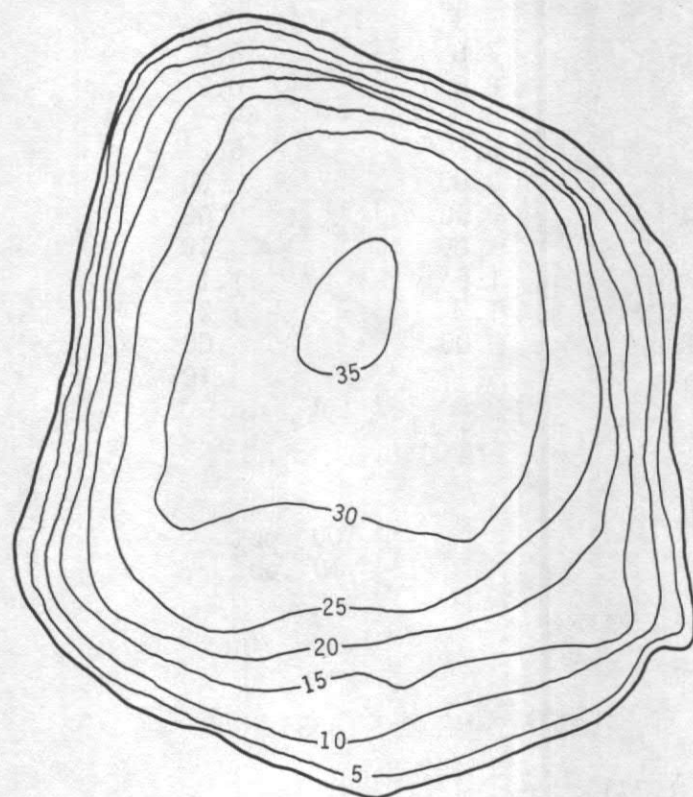
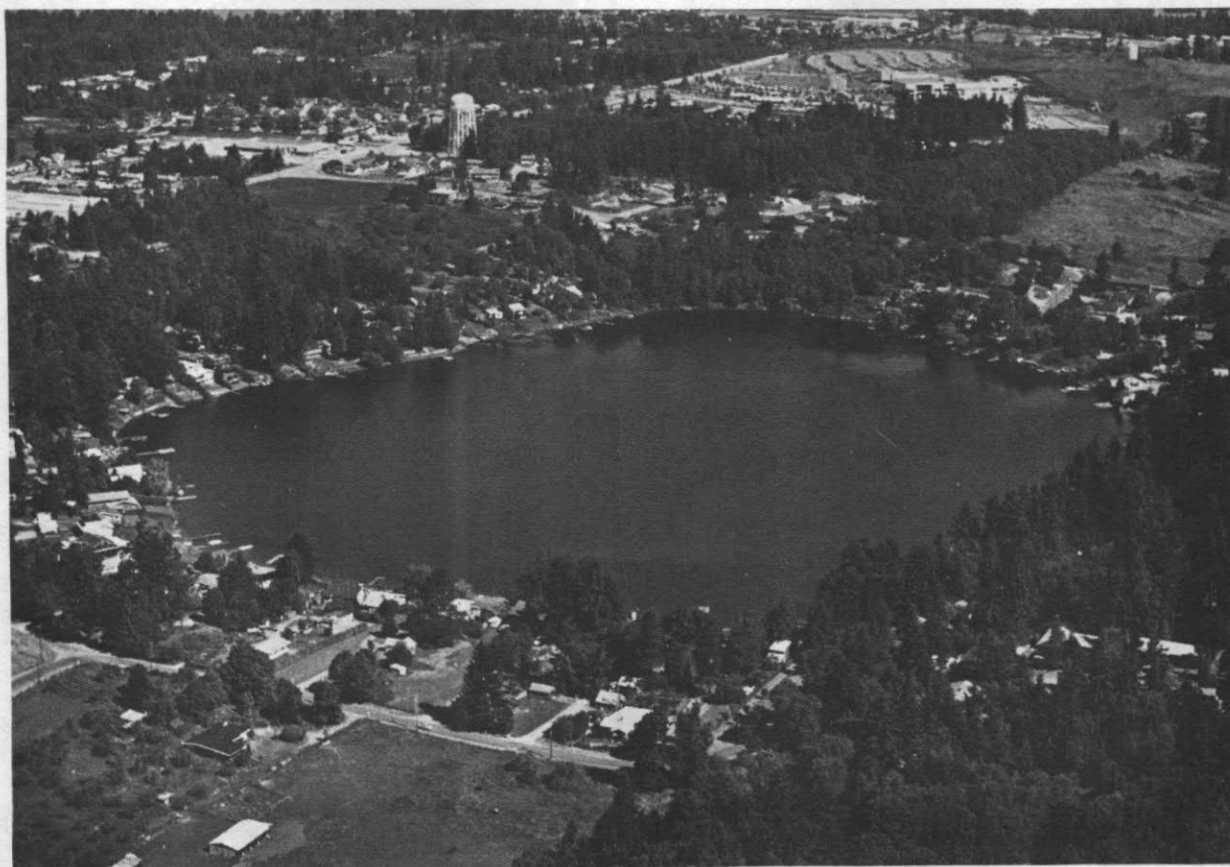
41

TSITP

47

TSICh1

0



EXPLANATION
 — 25 —
 Line of equal
 water depth
 Interval 5 feet

Louise Lake, Pierce County. Photo taken June 24, 1981, view northwesterly.
 Bathymetric map from Washington Department of Game, June 5, 1950.

MORGAN LAKE

PIERCE COUNTY

WRIA 10

T18N-R05E-30

LATITUDE 47° 00' 48" LONGITUDE 122° 13' 41"

PHYSICAL DATA

Drainage area	1.20 mi ²
Altitude	688 ft
Lake Area	27 acres
Lake Volume	310 acre-ft
Mean Depth	12 ft
Maximum Depth	23 ft
Shoreline Length	0.79 mi
Shoreline Configuration	1.1
Development of Volume	0.51
Bottom Slope	1.9 pct
Surface Inflow	Yes
Surface Outflow	Yes

CULTURAL DATA

Residential Development	5	pct
Number of Nearshore Homes	2	
Land Use in Drainage Basin		
Residential-Urban	0	pct
Residential-Suburban	0	pct
Agricultural	26	pct
Forest or Unproductive	70	pct
Lake Surface	4	pct
Public Boat Access to Lake	No	

WATER-QUALITY DATA (in milligrams per liter unless otherwise indicated)

Date

June 3, 1981

Depth (ft)	3	16
Water Temperature (°C)	17.8	8.9
Dissolved Oxygen	8.5	0.2
Specific Conductance (umho)	60	69
pH (units)	6.5	6.2
Total Nitrate, as N	0.00	.00
Total Nitrite, as N	.00	.00
Total Ammonia, as N	.09	.10
Total Organic Nitrogen, as N	1.6	1.1
Total Nitrogen, as N	1.7	1.2
Dissolved Orthophosphate, as P	.00	.00
Total Phosphorus, as P	.11	.10
Secchi-Disc Visibility (ft)		4
Chlorophyll <u>a</u> (ug/L)	21.1	--

Aquatic Macrophyte Coverage

Littoral Zone

100 pct

Water-Surface Zone

10 pct

LAKE TROPHIC CLASSIFICATION

Characteristic Value

333

Trophic State Index (Carlson, 1977)

TSI_{SD}

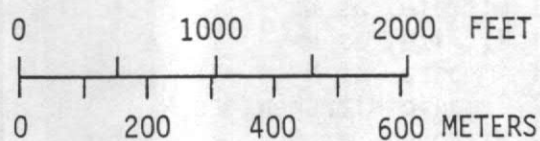
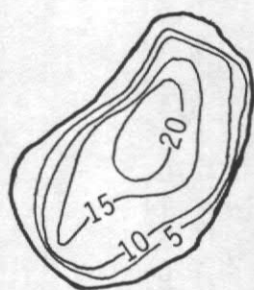
57

TSI_{TP}

72

TSI_{Chl}

60



EXPLANATION

— 10 —

Line of equal
water depth

Interval 5 feet

Morgan Lake, Pierce County. Photo taken June 3, 1981, view northeasterly.
Bathymetric map from U.S. Geological Survey, February 7, 1974.

OHOP LAKE

PIERCE COUNTY

WRIA 11

T16N-R04E-10

LATITUDE 46° 53' 06" LONGITUDE 122° 16' 38"

PHYSICAL DATA

Drainage area	17.3 mi ²
Altitude	524 ft
Lake Area	230 acres
Lake Volume	3,800 acre-ft
Mean Depth	17 ft
Maximum Depth	25 ft
Shoreline Length	4.6 mi
Shoreline Configuration	2.1
Development of Volume	0.66
Bottom Slope	4.5 pct
Surface Inflow	Yes
Surface Outflow	Yes

CULTURAL DATA

Residential Development	60	pct
Number of Nearshore Homes	144	
Land Use in Drainage Basin		
Residential-Urban	0	pct
Residential-Suburban	1	pct
Agricultural	5	pct
Forest or Unproductive	92	pct
Lake Surface	2	pct
Public Boat Access to Lake	Yes	

WATER-QUALITY DATA (in milligrams per liter unless otherwise indicated)

Date

June 3, 1981

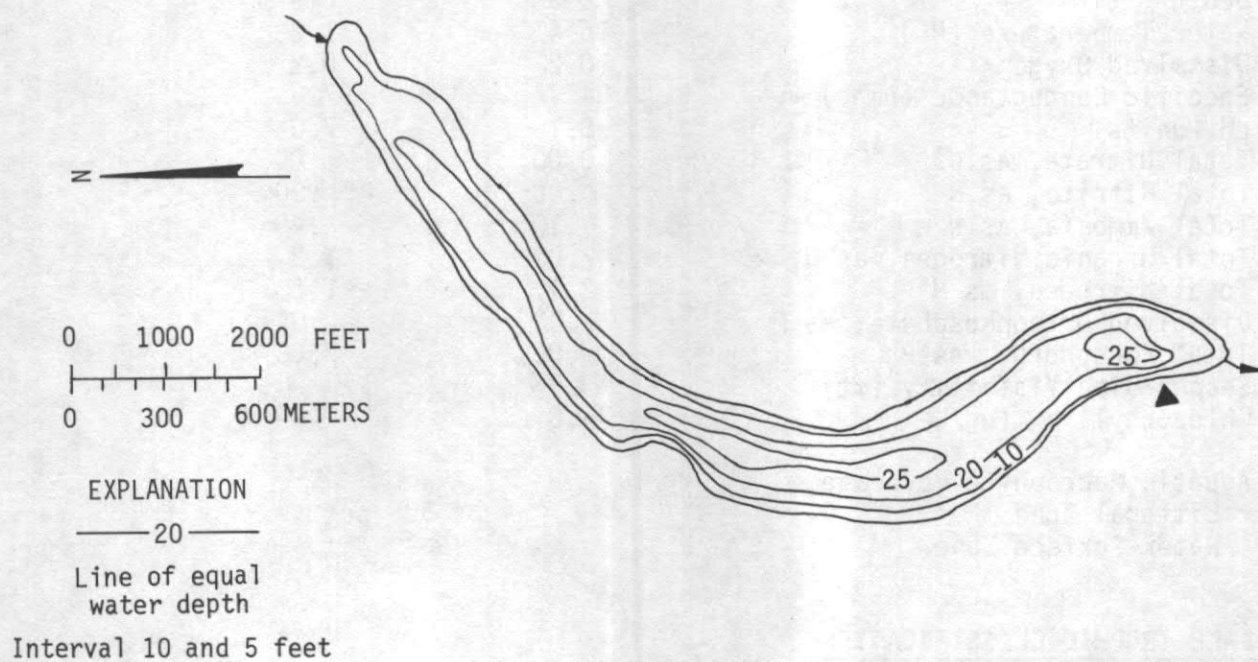
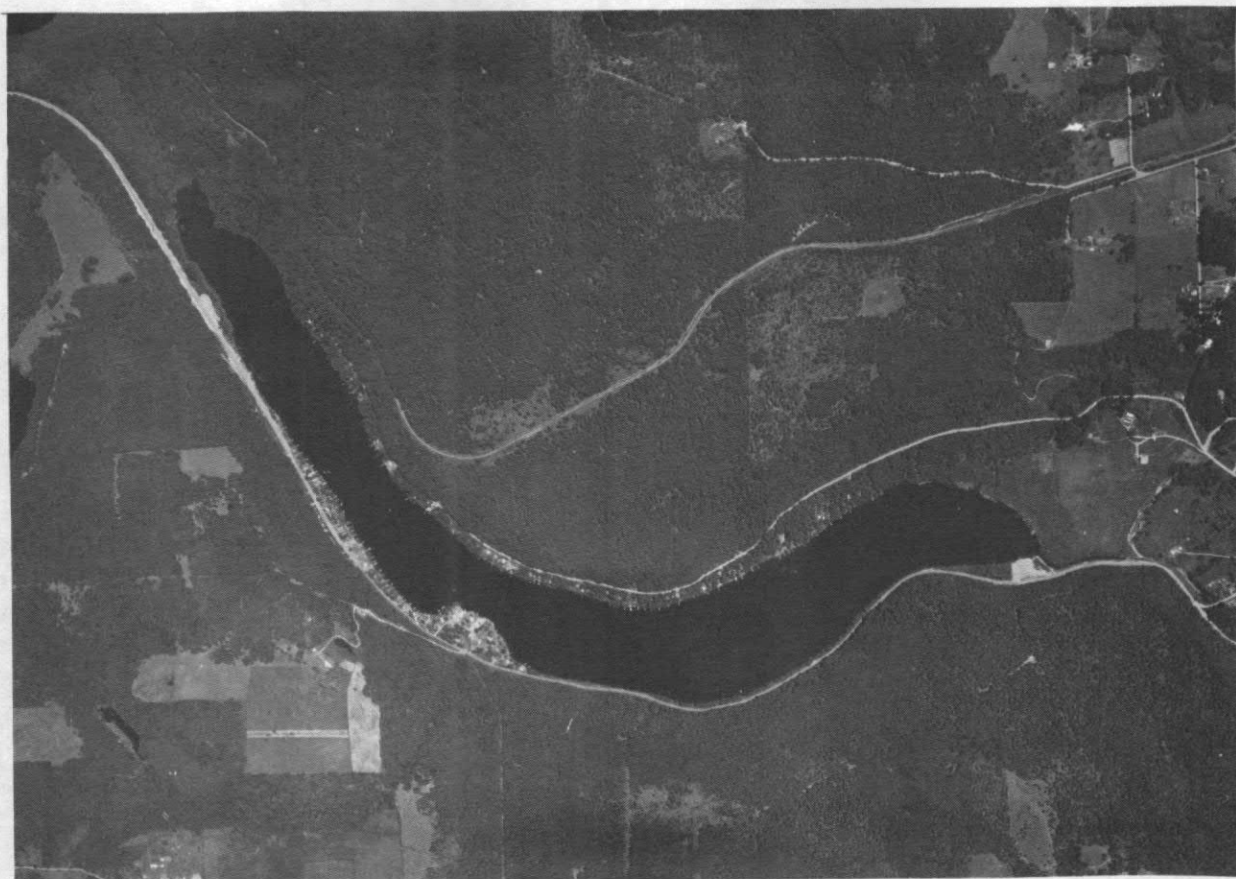
Depth (ft)	3	18
Water Temperature (°C)	17.5	10.6
Dissolved Oxygen	10.0	1.4
Specific Conductance (umho)	65	67
pH (units)	6.6	6.4
Total Nitrate, as N	0.13	0.22
Total Nitrite, as N	.01	.01
Total Ammonia, as N	.09	.14
Total Organic Nitrogen, as N	1.3	1.3
Total Nitrogen, as N	1.5	1.6
Dissolved Orthophosphate, as P	.01	.01
Total Phosphorus, as P	.06	.10
Secchi-Disc Visibility (ft)		5
Chlorophyll <u>a</u> (ug/L)	16.8	--
Aquatic Macrophyte Coverage		
Littoral Zone		5 pct
Water-Surface Zone		<1 pct

LAKE TROPHIC CLASSIFICATION

Characteristic Value 256

Trophic State Index (Carlson, 1977)

TSI _{SD}	54
TSI _{TP}	63
TSI _{Chl}	58



Ohop Lake, Pierce County. Photo taken June 21, 1971.
 Bathymetric map from Washington Department of Game, June 14, 1954.

SILVER LAKE

PIERCE COUNTY

WRIA 11

T16N-R03E-12

LATITUDE 46° 52' 53" LONGITUDE 122° 21' 55"

PHYSICAL DATA

Drainage area	1.83 mi ²
Altitude	604 ft
Lake Area	150 acres
Lake Volume	1,800 acre-ft
Mean Depth	12 ft
Maximum Depth	25 ft
Shoreline Length	1.7 mi
Shoreline Configuration	1.0
Development of Volume	0.54
Bottom Slope	2.1 pct
Surface Inflow	No
Surface Outflow	Yes

CULTURAL DATA

Residential Development	30	pct
Number of Nearshore Homes	26	
Land Use in Drainage Basin		
Residential-Urban	0	pct
Residential-Suburban	1	pct
Agricultural	43	pct
Forest or Unproductive	43	pct
Lake Surface	13	pct
Public Boat Access to Lake	Yes	

WATER-QUALITY DATA (in milligrams per liter unless otherwise indicated)

Date

June 23, 1981

Depth (ft)	3	19
Water Temperature (°C)	16.4	11.2
Dissolved Oxygen	10.2	0.2
Specific Conductance (umho)	84	97
pH (units)	8.1	7.0
Total Nitrate, as N	0.00	.00
Total Nitrite, as N	.00	.00
Total Ammonia, as N	.10	.40
Total Organic Nitrogen, as N	2.0	1.2
Total Nitrogen, as N	2.1	1.6
Dissolved Orthophosphate, as P	.03	.07
Total Phosphorus, as P	.06	.08
Secchi-Disc Visibility (ft)		3
Chlorophyll <u>a</u> (ug/L)	74.8	--

Aquatic Macrophyte Coverage

Littoral Zone

50 pct

Water-Surface Zone

<2 pct

LAKE TROPHIC CLASSIFICATION

Characteristic Value

572

Trophic State Index (Carlson, 1977)

TSI_{SD}

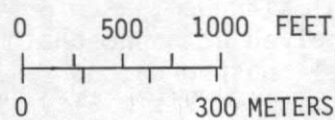
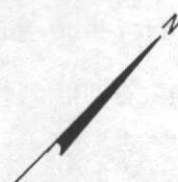
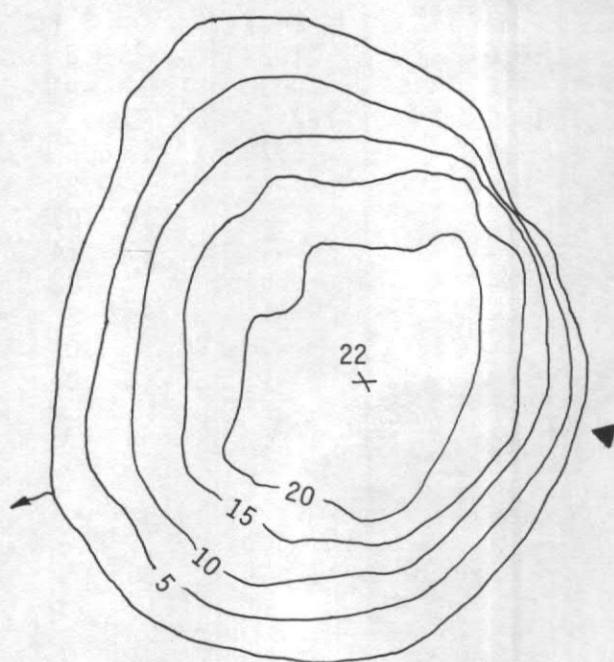
61

TSI_{TP}

63

TSI_{Chl}

73



EXPLANATION
 — 10 —
 Line of equal
 water depth
 Interval 5 feet

Silver Lake, Pierce County. Photo taken August 2, 1974, view northwesterly.
 Bathymetric map from Washington Department of Game, date unknown.

SPANAWAY LAKE

PIERCE COUNTY

WRIA 12

T19N-R03E-20

LATITUDE 47° 07' 11" LONGITUDE 122° 26' 45"

PHYSICAL DATA

Drainage area	17.0 mi ²
Altitude	320 ft
Lake Area	280 acres
Lake Volume	4,600 acre-ft
Mean Depth	16 ft
Maximum Depth	28 ft
Shoreline Length	4.4 mi
Shoreline Configuration	1.9
Development of Volume	0.57
Bottom Slope	0.71 pct
Surface Inflow	Yes
Surface Outflow	Yes

CULTURAL DATA

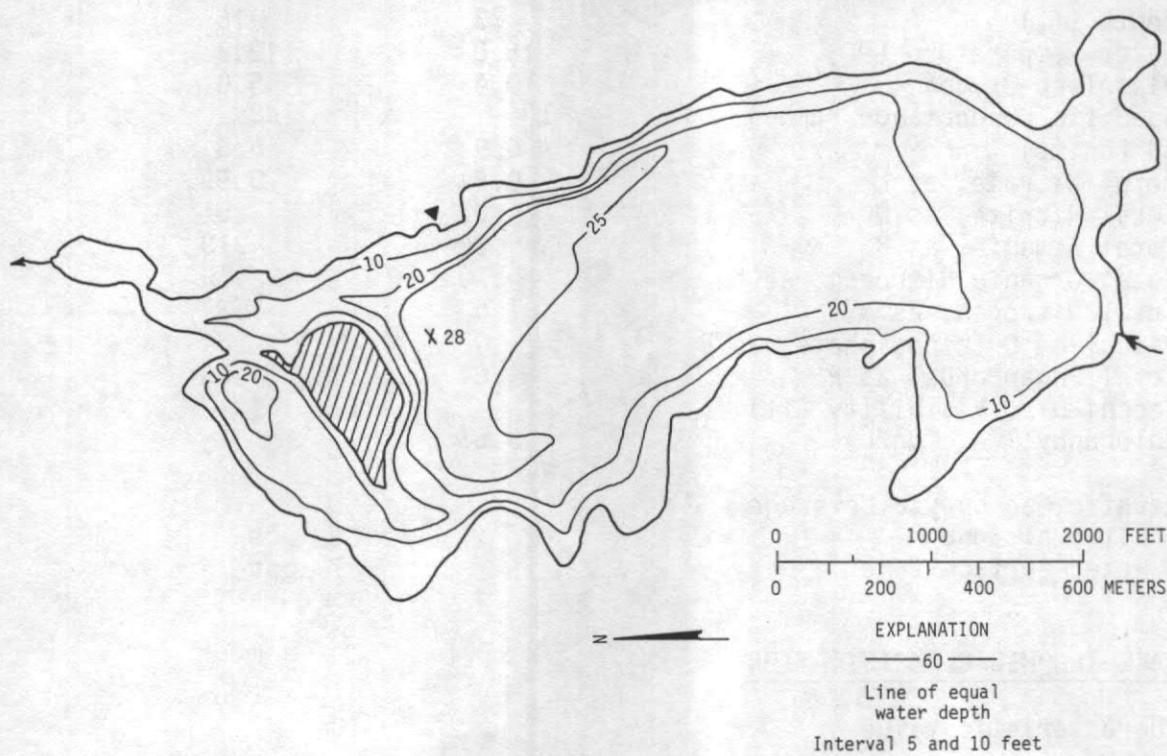
Residential Development	80	pct
Number of Nearshore Homes	161	
Land Use in Drainage Basin		
Residential-Urban	5	pct
Residential-Suburban	38	pct
Agricultural	0	pct
Forest or Unproductive	54	pct
Lake Surface	3	pct
Public Boat Access to Lake	Yes	

WATER-QUALITY DATA (in milligrams per liter unless otherwise indicated)

Date	June 11, 1981		September 17, 1981	
Depth (ft)	3 ft	24 ft	3 ft	25 ft
Water Temperature (°C)	16.6	11.2	19.8	16.4
Dissolved Oxygen	9.0	0.2	--	--
Specific Conductance (umho)	114	122	184	184
pH (units)	7.0	6.7	6.5	6.4
Total Nitrate, as N	--	--	0.21	0.12
Total Nitrite, as N	--	--	.03	.04
Total Ammonia, as N	--	--	.14	.92
Total Organic Nitrogen, as N	--	--	.82	1.1
Total Nitrogen, as N	--	--	1.2	2.2
Dissolved Orthophosphate, as P	--	--	.01	.20
Total Phosphorus, as P	--	--	.01	.29
Secchi-Disc Visibility (ft)		22		14
Chlorophyll <u>a</u> (ug/L)	1.62	--	--	--
Aquatic Macrophyte Coverage				
Littoral Zone		15 pct		-- pct
Water-Surface Zone		1 pct		-- pct

LAKE TROPHIC CLASSIFICATION

Characteristic Value	--	87
Trophic State Index (Carlson, 1977)		
TSI _{SD}	33	39
TSI _{TP}	--	37
TSI _{Chl}	35	--



Spanaway Lake, Pierce County. Photo taken May 20, 1978.
Bathymetric map from Washington Department of Game, February 2, 1950.

STEILACOOM LAKE

PIERCE COUNTY

WRIA 12

T20N-R02E-34

LATITUDE 47° 10' 40" LONGITUDE 122° 32' 04"

PHYSICAL DATA

Drainage area	89.4 mi ²
Altitude	210 ft
Lake Area	320 acres
Lake Volume	3,500 acre-ft
Mean Depth	11 ft
Maximum Depth	20 ft
Shoreline Length	5.7 mi
Shoreline Configuration	2.3
Development of Volume	0.56
Bottom Slope	2.8 pct
Surface Inflow	Yes
Surface Outflow	Yes

CULTURAL DATA

Residential Development	100	pct
Number of Nearshore Homes	285	
Land Use in Drainage Basin		
Residential-Urban	28	pct
Residential-Suburban	27	pct
Agricultural	2	pct
Forest or Unproductive	42	pct
Lake Surface	1	pct
Public Boat Access to Lake	No	

WATER-QUALITY DATA (in milligrams per liter unless otherwise indicated)

Date

June 10, 1981

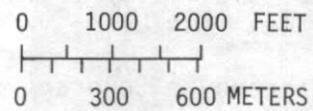
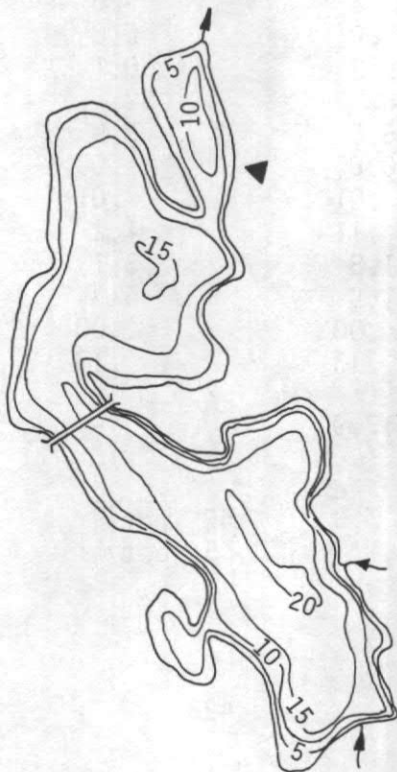
Depth (ft)	3	16
Water Temperature (°C)	16.0	13.3
Dissolved Oxygen	10.4	5.0
Specific Conductance (umho)	134	148
pH (units)	6.9	6.8
Total Nitrate, as N	0.84	0.99
Total Nitrite, as N	.01	.01
Total Ammonia, as N	.04	.10
Total Organic Nitrogen, as N	.70	.70
Total Nitrogen, as N	1.6	1.8
Dissolved Orthophosphate, as P	.02	.04
Total Phosphorus, as P	.04	.06
Secchi-Disc Visibility (ft)		11
Chlorophyll <u>a</u> (ug/L)	3.57	--
Aquatic Macrophyte Coverage		
Littoral Zone		<1 pct
Water-Surface Zone		<1 pct

LAKE TROPHIC CLASSIFICATION

Characteristic Value 104

Trophic State Index (Carlson, 1977)

TSI _{SD}	43
TSI _{TP}	57
TSI _{Chl}	43



EXPLANATION

—10—

Line of equal
water depth

Interval 5 feet

Steilacoom Lake, Pierce County. Photo taken June 26, 1979.
Bathymetric map from Washington Department of Game, June 2, 1950.

STIDHAM LAKE

PIERCE COUNTY

WRIA 11

T17N-R04E-22

LATITUDE 46° 57' 08" LONGITUDE 122° 16' 36"

PHYSICAL DATA

Drainage area	0.12 mi ²
Altitude	655 ft
Lake Area	10 acres
Lake Volume	120 acre-ft
Mean Depth	12 ft
Maximum Depth	22 ft
Shoreline Length	0.50 mi
Shoreline Configuration	1.1
Development of Volume	0.56
Bottom Slope	3.0 pct
Surface Inflow	No
Surface Outflow	Yes

CULTURAL DATA

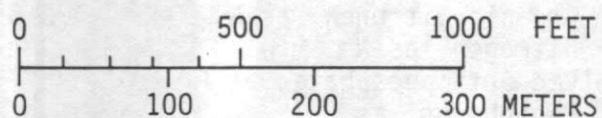
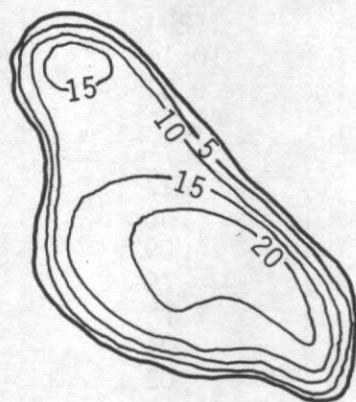
Residential Development	0	pct
Number of Nearshore Homes	0	
Land Use in Drainage Basin		
Residential-Urban	0	pct
Residential-Suburban	0	pct
Agricultural	19	pct
Forest or Unproductive	68	pct
Lake Surface	13	pct
Public Boat Access to Lake	No	

WATER-QUALITY DATA (in milligrams per liter unless otherwise indicated)

Date	June 3, 1981	
Depth (ft)	3	20
Water Temperature (°C)	17.0	6.0
Dissolved Oxygen	5.2	0.1
Specific Conductance (umho)	36	52
pH (units)	6.5	5.9
Total Nitrate, as N	0.00	.00
Total Nitrite, as N	.01	.01
Total Ammonia, as N	.11	1.2
Total Organic Nitrogen, as N	1.8	3.1
Total Nitrogen, as N	1.9	4.3
Dissolved Orthophosphate, as P	.00	.00
Total Phosphorus, as P	.13	.13
Secchi-Disc Visibility (ft)		2.5
Chlorophyll <u>a</u> (ug/L)	17.9	--
Aquatic Macrophyte Coverage		
Littoral Zone		40 pct
Water-Surface Zone		<5 pct

LAKE TROPHIC CLASSIFICATION

Characteristic Value	423
Trophic State Index (Carlson, 1977)	
TSI _{SD}	64
TSI _{TP}	74
TSI _{Chl}	59



EXPLANATION

— 10 —

Line of equal
water depth

Interval 5 feet

Stidham Lake, Pierce County. Photo taken June 3, 1981, view easterly.
Bathymetric map from U.S. Geological Survey, June 20, 1973.

TANWAX LAKE

PIERCE COUNTY

WRIA 11

T17N-R04E-23

LATITUDE 46° 56' 40" LONGITUDE 122° 16' 26"

PHYSICAL DATA

Drainage area	4.08 mi ²
Altitude	600 ft
Lake Area	170 acres
Lake Volume	3,300 acre-ft
Mean Depth	20 ft
Maximum Depth	30 ft
Shoreline Length	2.8 mi
Shoreline Configuration	1.5
Development of Volume	0.65
Bottom Slope	5.1 pct
Surface Inflow	No
Surface Outflow	Yes

CULTURAL DATA

Residential Development	70	pct
Number of Nearshore Homes	69	
Land Use in Drainage Basin		
Residential-Urban	0	pct
Residential-Suburban	6	pct
Agricultural	24	pct
Forest or Unproductive	62	pct
Lake Surface	8	pct
Public Boat Access to Lake	Yes	

WATER-QUALITY DATA (in milligrams per liter unless otherwise indicated)

Date

June 23, 1981

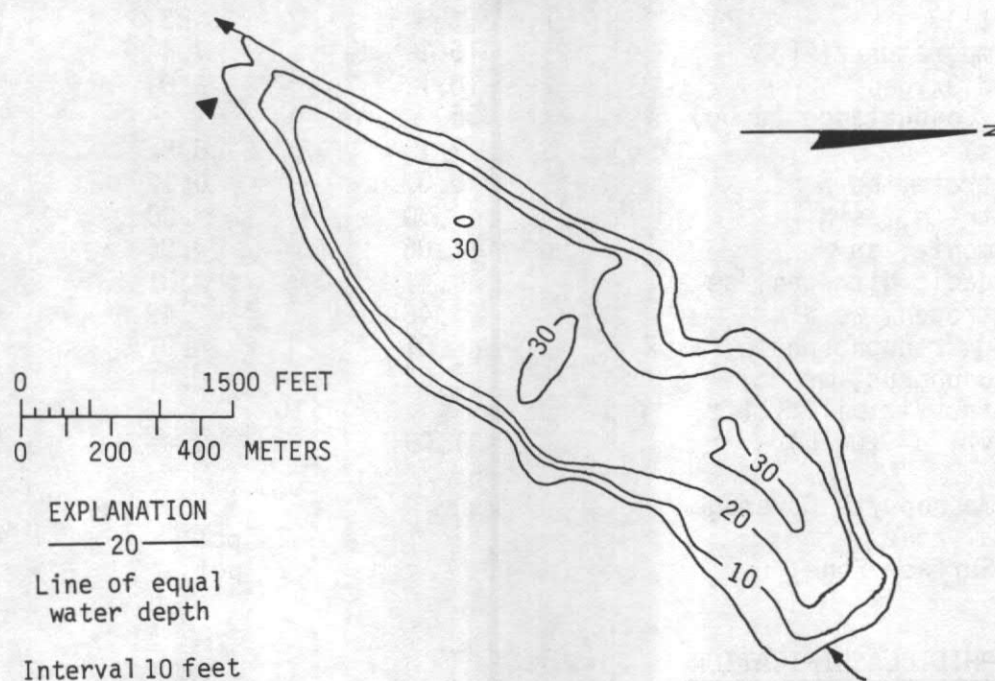
Depth (ft)	3	20
Water Temperature (°C)	16.2	10.1
Dissolved Oxygen	9.0	0.3
Specific Conductance (umho)	67	80
pH (units)	7.2	6.7
Total Nitrate, as N	0.01	.17
Total Nitrite, as N	.00	.00
Total Ammonia, as N	.08	.09
Total Organic Nitrogen, as N	1.0	.79
Total Nitrogen, as N	1.1	1.1
Dissolved Orthophosphate, as P	.03	.04
Total Phosphorus, as P	.03	.05
Secchi-Disc Visibility (ft)		4
Chlorophyll <u>a</u> (ug/L)	17.58	--
Aquatic Macrophyte Coverage		
Littoral Zone		75 pct
Water-Surface Zone		10 pct

LAKE TROPHIC CLASSIFICATION

Characteristic Value 253

Trophic State Index (Carlson, 1977)

TSI _{SD}	57
TSI _{TP}	53
TSI _{chl}	59



Tanwax Lake, Pierce County. Photo taken June 23, 1981, view southwesterly.
Bathymetric map from Washington Department of Game, June 26, 1952.

TAPPS LAKE

PIERCE COUNTY

WRIA 10

T20N-R05E-08

LATITUDE 47° 14' 18" LONGITUDE 122° 12' 11"

PHYSICAL DATA

Drainage area	-- mi ²
Altitude	543 ft
Lake Area	2,700 acres
Lake Volume	67,000 acre-ft
Mean Depth	25 ft
Maximum Depth	90 ft
Shoreline Length	42 mi
Shoreline Configuration	5.7
Development of Volume	0.28
Bottom Slope	0.73 pct
Surface Inflow	Yes
Surface Outflow	Yes

CULTURAL DATA

Residential Development	70	pct
Number of Nearshore Homes	650	
Land Use in Drainage Basin		
Residential-Urban	--	pct
Residential-Suburban	--	pct
Agricultural	--	pct
Forest or Unproductive	--	pct
Lake Surface	--	pct
Public Boat Access to Lake	Yes	

WATER-QUALITY DATA (in milligrams per liter unless otherwise indicated)

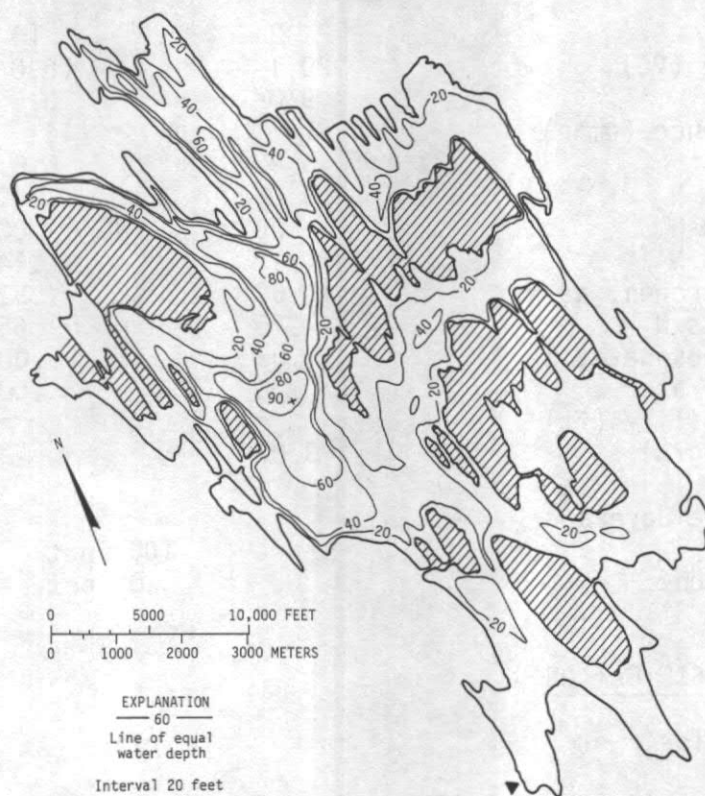
Date

June 24, 1981

Depth (ft)	3	83
Water Temperature (°C)	15.1	7.4
Dissolved Oxygen	10.1	8.0
Specific Conductance (umho)	55	61
pH (units)	7.1	6.8
Total Nitrate, as N	0.01	0.12
Total Nitrite, as N	.00	.00
Total Ammonia, as N	.06	.06
Total Organic Nitrogen, as N	.41	.31
Total Nitrogen, as N	.48	.49
Dissolved Orthophosphate, as P	.01	.01
Total Phosphorus, as P	.02	.01
Secchi-Disc Visibility (ft)		10
Chlorophyll <u>a</u> (ug/L)	1.09	--
Aquatic Macrophyte Coverage		
Littoral Zone		< 2 pct
Water-Surface Zone		< 2 pct

LAKE TROPHIC CLASSIFICATION

Characteristic Value	73
Trophic State Index (Carlson, 1977)	
TSI _{SD}	44
TSI _{TP}	47
TSI _{Chl}	31



Tapps Lake, Pierce County. Photo taken June 23, 1981, view northerly.
Bathymetric map from U.S. Geological Survey, May 31, 1974.